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A STUDY

OF

EDUCATION IN BARODA.

WITH

A SPECIAL CHAPTER ON THE HISTORY OF EDUCATION IN INDIA.

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BY

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1915

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TO

MODERN BARODA

AND

ITS MAKER

His Highness Maharaja

Sir Sayaji Rao Gaekwar,

G.C.S.I.,

Sena Khaskhel Samsher Bahadur.

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PREFACE.

THE educationists and other inquisitive people of the United States of America, had been hearing a great deal about the ruler of Baroda and his pioneer work in matters educational. However, they had no definite facts to know the greatness of the work. To satisfy this want, this subject was suggested to me by my professors, for my dissertation, at the Teachers College of the Columbia University. Hence this humble effort. The necessary data were collected during 1910-11, and they were compiled into the present form in the begining of 1912. This work was done for the American public, under American atmosphere, as a student of an American University. Owing to some personal difficulties this compiation could not be published earlier.

The first chapter on History of Education in India, has been written to show what we as a nation possessed before the modern influences began to set in, forming a sort of a back-ground for the present developments.

Since this was written, education in Baroda has been steadily progressing and several reforms, like the introduction of Kindergarten classes, the opening of a reformatory, an additional Teacher's College for men, changes in the curricula, raising the compulsory age limit to fourteen, and many others have been inaugurated.

My warmest thanks are due to Mr. Manubhai N. Mehta M.A., L.L.B., Amatya Saheb (Counsellor) to the Baroda State, for writing a valuable and instructive intro-

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duction to this volume. He has been greatly instrumental in the present educational development in the State, being the Counsellor to His Highness the Maharaja Gaekwar in matters pertaining to the educational department. I am indebted to Mr. C. T. Modi, the retired educational Inspector of the State for supplying me with all valuable information on the subject, while I was in the United States. I also owe my sincere and heart-felt thanks to Professors Monroe, Strayer, Sachs, Suzzallo, and A. V. W. Jackson for reading the manuscript and especially to Professor Farrington for reading it over with me and making numerous useful suggestions. I cannot conclude without expressing my deep sense of obligation to my friend Mr. K. M. Munshi B.A., L.L.B., Advocate, High Court, Bombay, for his help in seeing this book through the press.

T. R. PANDYA.

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INTRODUCTION.

It was probably the saying of Epictetus that you would do the greatest service to the State, if you raise, not the roofs of houses, but the souls of citizens; for it is better that high souls should dwell in lowly houses than for mean slaves to lurk in great houses. The problem of National Education that the present Ruler of Baroda, has undertaken to solve in India has for its object the extrication of his subjects from the dismal abyss of hoary superstition and ignorance and exalt them to the status of citizens. Compulsory Education is the one plank in the edifice of reforms inaugurated by His Highness Maharaja Sayajirao Gaekwad which is likely to serve as the mystic ladder to National Regeneration.

It was therefore a happy inspiration that suggested to Dr. Pandya the idea of writing a history of Education in Baroda as his thesis for the Doctor's Degree. Dr. Pandya finished his education at the Columbia University and he is only redeeming the debt he owes to Baroda and its beneficent ruler in placing this record of Educational progress achieved in an Indian State before the great American Commonwealth. The judgment of a free and independent Nation on the Educational work of an Indian State that has done great service in popularising democratic ideals in the country will be impartial, and helpful to future progress. Its good points will be correctly appreciated at their proper worth; and its defects pointed out without reserve. The youngest Nation will thereby impart the vigour of fresh life to the oldest Nation with a living civilisation.

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Dr. Pandya's work commences with an erudite review in which the successive epochs of ancient civilisation in India rapidly march past before our imagination and leave an impress of the magnitude of the task lying before the Indian patriot, of rebuilding the edifice to the noble heights from which the nation has fallen. It reveals the crest, only dimly discernible, in the shadowy splendour of the empyrean and serving as the beacon to guide his devoted efforts at advancement.

The history of Education in Baroda is mainly a record of the spread of free Compulsory Education in the State. Dr. Pandya has presented some instructive figures illustrative of the progress achieved and of the stupendous work yet remaining to be accomplished. The percentage of population receiving education in the whole country comes to only 1.9 ; in the Bombay Presidency adjoining the State it rises to 3.2 ; while in Baroda it has mounted up to 10. in 1912-13. The latest Census has returned a total of 10,55,935 males and 9,76,863 females in the State ; and the percentage of children attending the Schools according to sex works out to 13 for males and over 7 for females. If the percentage of children of school-going age under the Compulsory Act is roughly calculated to be 15, the above percentages disclose the gratifying figures of 86 per cent of boys and 48 per cent of girls of school going age attending the schools. The average number of square miles served by one school in the Bombay Presidency comes to 16.7 as against 3.8 in Baroda, which spends over 10 per cent of its total revenues on Education. The total expense on education per capita in British India amounts to one sixteenth of a rupee; in Baroda it amounts to three fourths of a rupee. Baroda thus gives the lead in Educational matters to the country, which has yet to make a great

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head-way in the race as compared to other civilised nations.

It is not however in extent alone that Education in India needs development. The problem of intensive improvement is equally momentous. Besides enlarging the quantity or volume, the quality of Education demands considerable attention. What the Baroda Educational authorities aim at is not so much instruction as Education. The object of Education is accepted to be the cultivation of the powers of observation, the formation of character and the evolution of the mind. Education as now imparted only slakes the thirst for knowledge instead of ever whetting it; it prepares the student for the University and not for the world; it ceases with the school or the College instead of remaining a vital force ever reproducing an improved type, till to live to and to learn become one. "It is not" Says Jeremy Taylor, "the eye that sees the beauties of heaven, nor the ear, that hears the sweetness of music but the soul that perceives all the relishes of sensual and intellectual perceptions; and the more noble and excellent the soul is, the greater and more savoury are its perceptions. And if a child behold the rich ermine, or the diamonds of a starry night, because he makes no *reflex act* on himself and *sees not* what he sees, he can have but the pleasure of a fool or the deliciousness of a mule. True Education consists in stimulating this reflex act; which brings with it the proper discernment of the true, the correct determination of the right, and the artistic appreciation of the beautiful. Education is something very different from and higher than mere instruction; the latter only stores up for future use; but education sows the seed which ripens and bears fruit a hundred

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fold. Knowledge is Power and yet it is inferior to wisdom. It was remarked by Cowper, that,

" Knowledge is proud that she has learnt so much
Wisdom is humble that she knows no more "

It is this type of Wisdom which the object of true Education ought to be to cultivate. The ideal teacher ought to endeavour to build up right character in his pupils; and for this noble task of great moment the teacher himself has to be taught. Baroda maintains two Training Colleges which have this noble ideal in view and every year about four hundred teachers receive training in these Normal Schools. Dr. Pandya presides over one of these Institutions; and the impress he leaves on the character of the teachers trained up under him is so healthy that the task of building up a robust character among the rising generation is not without hope. The other Training College is also under the influence of another capable Educationalist, Mr. Dikshit who had also the benefit of completing his training at the London University. Both these gentlemen by ther culture hold out attractive exemplars for the teachers and their pupils to imitate and profit by.

The problem of female education in India is fraught with peculiar difficulties. Fallen from their high estate the Indian Women of the day are strongholds of superstition and bulwarks of bias. Unlike their ancient ideals they are content with perpetual tu elage and have no desire to shake off the subjection which enthralls their sex. Ordinarily to the high class women their wardrobe is their only library; and in the middle and lower classes their every day life is solely taken up by the church, the children and the kitchen. The tedium of their hum-drum life is rarely relieved by books and they have not culti-

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vated the inner eye which " finds tongues in trees, books in running brooks, sermons in stones and good in everything." The progress of a country is rightly gauged by the estimation in which its women are held ; and strenuous endeavour is necessary to awaken the public conscience to a right sense of the dignity the Indian women enjoyed in antiquity and to educate them in a manner worthy of their status and proud heritage. The commencement made in Baroda to educate the girls is noteworthy ; and its contribution to the task of female education is by no means mean.

Sam Weller has left on imperishable record, the complaint of a French parrot, " about insult being added to injury, in being not only confined in a cage but also made to speak the English language." Boys in the Indian Primary Schools also labour under a similar disability especially in the rural areas. Ever since the study of the Vernaculars was chilled under the cold breath of Macaulay's rhetoric, higher education through the Vernaculars has become a forlorn hope. To make an Indian boy learn Arithmetic and Geography, Sanitation and Sanskrit through the English tongue does not lead to conservation of energy or conduce to economy of time. Opportunities are wasted and one source of enriching the Vernaculars is hopelessly blocked. Baroda has been doing yeoman service in the uplifting of Vernaculars by largely adding to the stock of readable books in Gujrati and Marathi ; and the large net work of stationary and circulating Libraries that has recently sprung up, helps the supply of Vernacular Books to the reading public in villages. Books on advanced subjects, in History Sciences and Philosophy are got prepared in Vernaculars and scattered broad cast over the country for reading. A Vernacular College for instruction in subjects of academic learning was also thrown open ; but it failed to attract a

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large following for want of prospects of preferment and promotion. People care more for a "bread and butter" type of education than a scholastic one which does not help to feed their mouths ; and the experiment of evolving a Vernacular Academy was denied a fair trial.

The problem of class education has a peculiar significance in a caste-ridden country like India. Large communities of human beings rank low in the social scale and are regarded as untouchable. Birth carries with it a stamp of social degradation which no merit can redeem. Boys and girls belonging to these unfortunate classes are refused admission into the schools and they are left wholly unprovided so far as regards educational facilities. No tyranny is so oppressive as caste tyranny. Even so wise a man as Dr Johnson laid it down as a self evident axiom that if every one learned to read it would be impossible to find any one who would do the manual and the menial work of the world. The dignity of labour is better understood in Baroda ; and few states in India have laboured as zealously as Baroda to snap the chains of caste hegemony and burst the barriers of birth-rights and vested privileges.....Separate Primary schools have been opened in villages for the benefit of these untouchables ; and they are also given free admission along with boys of "the chosen" classes into the higher Secondary Schools. Out of a total population of 1,74,290 of these depressed classes, no less than 16,249 boys and girls receive education in the schools of the State, thus showing a little above 9 per cent to their entire number. When the commonest rights of humanity are denied to these human beings by the priest ridden castes the tension of their embittered feelings and the depth of their depression can well be imagined.

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Technical education in Baroda has not been neglected, but receives its due share of attention along with the humanistic studies from the Educational authorities. Time was when men in England were called upon to "sell their books and buy furnaces; forsake Minerva and the Muses as barren virgins and rely upon Vulcan." A proper scheme of education involves no such divorce of Athene, but combines the study of the Bible of Nature along with that of the Holy Bible. The importance of Science and the value of technical instruction, of manual training and the training of the eye are properly appraised, and no one limb is developed at the expense of the other in an ideal educational scheme. The Baroda Kala Bhuvan has been supplying this need for technical education in the country and attracts pupils from the far off Bengal, the Punjab and Sindh. About 400 boys receive technical instruction in various arts and crafts in this institution, which well serves the useful purpose of teaching its pupils to win their bread and butter and fight their battle of life. A sound system of education ought to satisfy this practical test of utility. Bacon wished our studies to be neither "a couch on which to rest; nor a cloister in which to promenade alone; nor a tower from which to look down on others; nor a fortress whence we may resist them; nor a workshop for gain and merchandise; but a rich armoury and treasury for the glory of the creator and the relief of man's estate." Such culture alone can ennoble life.

Ignorance is said to be the mother of evil; and a man who opens a school, closes a prison. "Of all Treasures, knowledge," says the Hitopadesha, "is the most precious; for it can neither be stolen, given away, or consumed." Learning is the greatest alms that can be given and it is a gift worthy of kings. Who will say,

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however, that all kings use their power and wealth for the advancement of learning? Ruskin speaks of "Moth-kings, who lay up treasures for the Moth; and rust-kings, who are to their peoples' strength as rust is to armour, and who lay up treasures for the rust; and of robber-kings laying up treasures for the robber; but how few are kings who have ever laid up treasures that needed no guarding; treasures of which the more thieves there were, the better?" Dr. Pandya has well brought out in this brochure how Maharaja Sayajirao Gaekwad has enriched his State with this treasure. He can well say "most of my children are born to poverty; but I will take care that they shall not grow up to ignorance." Learning alone is the Sesame that will open up the doors, not of robbers', but of kings' treasures; and these are flung open to all in Baroda, both full and free.

MANUBHAI N. MEHTA.

BARODA,
1st February 1915.

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EDUCATION IN BARODA.

CHAPTER I.

HISTORY OF EDUCATION IN INDIA.

In order to understand the educational system of a country, it is necessary to know the history of its education. The history of education being coextensive with the history of society, one should turn his eyes to the religious, social, and industrial life led by those people, and get his interpretations from the literature of their times. The ancient Hindu works, though defective as regards historical incidents, give a full and connected account of the civilization and progress of the nation. None of the other ancient literatures is as interesting and attractive as the Hindu literature.

The Oriental scholars have provisionally decided upon 2000 B. C. as the time of the beginning of the composing of Vedic Hymns. To show the progress of the civilization, Dutt divides the ancient history of India into several periods. The progress of education may also follow similar periods.

I. VEDIC PERIOD (2000–1400 B. C.)

Forms of Religion.

The religion of the Vedic period was more or less the worship of Nature wherever it was most attractive and impressive, as in "The bright sky, the blushing dawn, the rising sun, and the glowing fire." These strong impressions brought forth songs of praise and gratitude as found in the Rig Veda.

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This was not the very beginning of civilization. Even then the people were pretty well advanced in several matters. Many useful animals were already domesticated; the people built houses, villages, towns, constructed roads and boats for water communication and trade. Weaving, spinning and plaiting were known, and furs, skins, and woolen fabrics were made into garments. Carpentry had made considerable progress, and dyeing was not far behind. They were acquainted with gold, silver, and probably iron; and gold was used as a current medium for exchange. One verse says, "One sells a large quantity for a small price, and then goes to the purchaser and denies the sale, and asks for a higher price. But he cannot exceed the price once fixed on the plea that he has given a large quantity. Whether the price was adequate or inadequate, the price fixed at the time of sale must hold good."(1) This would tend to suggest how far even the ideas of business honesty must have progressed about four thousand years ago.

Civilization.

Every Rishi, or Vedic bard, was the father of a family. He owned cattle, cultivated land, fought against the enemies, protected his wife and children, and worshipped in his own house. There is no mention of any institution of learning but the family; and children received all their education from the family. There was nothing like a class or caste, and there were no restrictions as to the profession one might follow. One of the Rishis in one hymn says, "Behold, I am a composer of hymns, my father is a physician, my mother grinds corn on stone. We are all engaged in different occupations. As cows wander in the pasture fields for food, so we worship thee, O Soma! for wealth."(2) Such passages show how one

Richi and the professions.

(1) Dutt, R. C. Early Hindu Civilisation, p. 89
(2) Dutt, R. C. „ „ „ p. 56

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followed the profession according to his own liking; how labor was respected, how medicine was a calling in those times, and how the material ideas of working for wealth existed.

2. EPIC PERIOD. (1400–1000 B. C.)

During the Epic Period a good deal of literature sprang up, and earnest and enthusiastic men began to speculate about the nature of the soul, and the Supreme Being. Rules were laid down for Domestic and Social duties. Towns had their own judges, executive officers, and police. Agriculture was fostered, and King's Officers collected the taxes and looked to the comforts of the people. After the Aryans entered India, they began to go further into the country, and had to fight with a great force of the aborigines, i. e. the real inhabitants of the country. These wars created in them a natural social order. And as time advanced the strongest who could lead them in wars became the kings, and the wisest who advised, the advisors—the Brahmans. Still there was nothing like a caste system. Kings looked upon themselves as of the people, as merely guardians of the power entrusted to them by the people, and as such they worked simply for the benefit of the people.

Many of the kings were enlightened and learned, and their courts became seats of learning. Learned priests were kept in these courts for the cultivation of learning. On occasions people were called from different parts of the country, and discussions were held on subjects like "human mind," "the destination of the soul after death," "the future world," "the nature of gods and the different orders of beings," and on "the nature of that universal being who has manifested himself in all the works we see."

Court learning.

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Over and above this court learning, were established the Parishads, or establishments for learning similar to the universities of Europe, where young men went to be educated. The small Parishads, with few teachers, were somewhat similar to the secondary schools, and those with many teachers were like the universities. There were also private schools established by individual teachers, and a number of students often collected around them. The students lived with the teachers and served them as menials.

Institutes of learning.

There was nothing like a state school system or a compulsory education law. However, the system was a real public system, as the institutions were all really popular institutions, wholly supported by the good will of the people; and though there was no compulsory law, most of the Aryan boys were sent to school at an early age. There were no rigid castes and caste restrictions. All boys that went to the same school were educated together, learnt the same religion and code of duties, and returned home.

Laws were enacted, and astronomy and several other branches of learning were cultivated during this period.

Curriculum.

In Chhandogya Upanishad, Narad says to Sanatkumara "I know the Rig Veda, Sir, the Yajur Veda, the Sama Veda, as the fourth the Atharvana, as the fifth the Itihasa Purana, the Veda of the Vedas (grammar) the Pitrya (the rules for sacrifices for the ancestors), the Rasi (the science of numbers), the Daiva (the science of portents), the Nidhi (the science of time), the Vakovakya (logic), the Ekayana (ethics) the Deva Vidya (etymology), the Brahman Vidya, (pronunciation, prosody, etc.), the Bhuta Vidya (the science of demons), the Kshatra Vidya (the science of weapons), the Nakshatra Vidya (astronomy), the Sarpa Devanjana

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Vidya (the science of serpents and of genii). All this I know, Sir." (1)

Position of Women.

Even the women often distinguished themselves in the science and learning of the times. Women who were considered as 'companions in solitude, fathers in advice, mothers in all seasons of distress and rest while passing through the life's wilderness,' were held in great honor. They performed sacrifices and acted as Rishis. Vishvavara composed hymns invoking the God Agni (Fire) to regulate and keep within virtuous bounds the mutual relations of married couples. Women exercised the right of selecting husbands. Choice marriages were not always happy for "many a woman is attracted by the wealth of him who seeks her. But the woman who is of gentle nature and of graceful form selects, among many, her own loved one as her husband." (2) Marriage was not compulsory. The unmarried remained with their parents. They were given their rights to property and inheritance, and as Dutt says, "The historian of India who has studied the literature of the Hindus, will have no hesitation in asserting that never in the most polished days of Greece or Rome were women held in such high regard in those countries as in India three thousand yearsago." (3)

3. RATIONALISTIC PERIOD (1000-320 B.C.)

The Rationalistic Period was the period of the greatest expansion of the Hindus. "They became more venturesome. Whatever literature was handed down from ancient times was put in a condensed, practical shape,

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(1) Dutt, R.C. Early Hindu Civilization, p. 178
(2) do do do do p. 178
(3) do do do do p. 171

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and new discoveries in every department of science were made with the boldness of new explorers and conquerors." (1)

It was during this time that the life of a Hindu was divided into four periods. The Hindu boy was initiated as a student between the age of eight and twelve. Then he went to the teacher's house and began the student-period of his life. He lived with the teacher for twelve years at least (even longer if necessary for his chosen studies), and received all the education desired. Here there was that ideal-touch and sympathy between the teacher and the taught, which cannot be found elsewhere. The pupil after getting all the desired instruction from one or various teachers, went home, after giving his teachers gifts in return sell knowledge, or receive any pay for the instruction; but the pupils generally gave presents when leaving.

Life of a student.

The schools were supported by donations from rich men and princes. In several, some of the pupils, especially Brahmans, who were not expected to give any gifts to the teachers when leaving, went out in the city or village to beg, like the mendicant pupils of the middle ages in Europe. Whatever they obtained was handed over to the teacher, who looked after their board, lodging and other necessities of life.

School funds.

A monitorial system was in great vogue. The clever student had to take charge of the newcomers and the backward, and had to help them in their work. Bell conceived his system from his experiences in India. The system is in use even yet in several places.

Monitorial system

(1) Dutt, R. C. Early Hindu Civilisation, p. 199.

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Education was a free gift to those who wished to possess it. The prince and the pauper sat in the same line, and never got the idea of social inequality between them. As all the pupils lived together with the teacher, and many times the teachers had their families too with them, the pupils found themselves in a healthy social life. This life was more effective than that of the present boarding schools and colleges. The student felt that he was getting more from his tutor than his labors entitled him to, and the teacher did it all as a duty to society, having no selfish motive at all. This made the student think that as he had reaped the benefits from the tutor, he was bound to give others or society similar benefits through self sacrifice. He felt he was obligated to society, and thus he worked more for social welfare, and was goaded with a greater force to perform his duties as one of the society.

Results of the system of free education.

After the student completed his studies, his skill was exhibited before the public. The Brahman pupils showed their learning in public discussions, and the military class showed their dexterity in the use of arms.

Public exhibition of learning.

Then the pupil went home, got married, became a householder, and entered the second stage of his life. The third stage was that of retirement into the forest after about twenty-four years of home life. Generally the husband and the wife, having left the worldly affairs to their children, retired into the forest and the learned ones took up the work of teaching. Then after about twenty-four years of this stage, they entered the last stage of life—the renunciation of the world, when they had no other duty but to meditate, think about the Supreme Being and help in solving doubtful ethical questions for those who went to them for such help.

Life after Completion of Studies.

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The main object of education was the moral and spiritual culture of the soul. They were taught the Vedas and the six limbs of the Vedas. The first limb was called Shiksha or Phonetics, the science explaining the correct pronounciations of the words used. The second was Chhanda or metre. This had a clear scientific treatment for the metre of the Vedas, so that they can be chanted correctly. The third was Vyakarana, or grammar. Panini's grammar that was taught, is the best and the most perfect grammar that the world has ever known. According to Dutt, Panini, the author, lived about 1000 B.C. The fact that thousands of words in a language can be resolved to a small number of roots was known before Panini, and was used by him—a fact that has been discovered in Europe within the last century. The fourth limb was Nirukta, or science of etymology, giving the various meanings of words as well as the different use of the same word. The fifth branch was that of the Kalpa Sutras, consisting of Shrauta, Sutras, or laws about sacrifices, Dharma Sutras, or laws treating of the duties or a true citizen, Grihya Sutras, or laws for domestic life, and Sulva Sutras, or the geometric principles for constructing sacrificial altars. The sixth was Jyotish, or astronomy, which was required for fixing the time for sacrifices. In the College also were studied Philosophy, Theology and Hindu law—civil and criminal, containing law of agriculture, law of property, law of usury, law of inheritance and of partition.

Curriculum.

Instruction was imparted only by rote. The student respectfully fixed his attention on the teacher and said, "Venerable Sir, recite." Every day lessons were thus recited by the teacher and learnt by the student, the latter dividing his time between studying his lessons and doing the household work of his teacher. Concise law codes were written, and were learnt by heart by the students, so that they

Method of teaching.

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might not forget their duties as citizens and members of society.

Uddalaka, while teaching his son Svetaketu, the true nature of the Universal Being, says, "As the bees, my son, make honey by collecting the juices of distant trees, and reduce the juice into one form, and as these juices have no discrimination, so that they might say, I am the juice of this tree or that,' in the same manner, my son, all these creatures, when they have become merged in the True, know not that they are merged into the True."(1) In the same way, he takes the example of rivers merged into the sea, and the salt dissolved in water; explaining that the Universal Being, though invisible, dwells in us, as the salt is in the water.

In the Kena and Isa Upanishads, the pupil asks, "At whose wish is the mind sent forth to proceed on its errand? At whose command does the first breath go forth? At whose wish do we utter this speech? What good directs the eye or the ear?"(2)

The teacher replies, "It is the ear of the ear, the mind of the mind, the breath of the breath, and the eye of the eye. That which is not expressed by speech and by which speech is expressed; that which does not think by mind, and by which mind is thought; that which does not see by the eye, and by which one sees; that which does not hear by the ear, and by which the ear is heard; that which does not breathe by breath, and by which breath is drawn—that alone know as Brahma—not that which people here adore."(1)

Origin of Caste.

The casts feeling originated thru the differences between the Aryans and non-Aryans, and it increased thru the differentiation of occupation. The ideal of Plato's republic of having the state divided into three classes, the philosophical, the

(1) (2) Dutt, R. C. Early Hindu Civilisation, p. 192-3

(1) Dutt, R. C. Early Hindu Civilisation, p. 193.

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soldier, and the industrial, was put into practice in India long before Plato existed. He did not find any way for his Philosopher to better himself save to sacrifice himself for the sake of the State. India removed this deficiency by supplying the four stages of life, viz., Brahmacharya (the student life), Grahasthashrama (citizen's life), Vanaprasthashrama (the forest life), and Sanyasta (the life when all the worldly duties are renounced). In the fourth stage one had the chance for further progress after he had completed the first three stages of worldly duty. Plato determined the membership in the classes thru education. In India it was theoretically allowed and practically done in several cases. However, when the religious rites became more elaborate, the priests who alone could perform such complicated rites rose in the estimation of the people, until they were naturally segregated from the ordinary people, as a distinct and superior caste.

Toward the end of this period, castes became more rigid. The four castes were, the Brahman (the teachers and preachers), the Khshatriya (the military men), the Vaishya (the merchants, artisans and farmers), and the Shudra (the laborers). The Brahmans began to be very autocratic, and much attention was given to formal rituals. As a protest to all this, Buddha, the great Prophet, arose in the sixth century before Christ, and promulgated his doctrines of equality, of brotherhood of mankind, and of showing mercy not only to human beings but also to animals. Even Vasishta, a Brahman, protests on seeing the Brahmans fail to perform their real duties, saying : " Brahmans who do not study or teach the Vedas, or keep sacred fires, become equal to Shudras. The king shall punish that village where Brahmans unobservant of these sacred duties and ignorant of the Veda, subsist by begging. An elephant made of wood, an antelope made of leather, and a

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Brahman ignorant of the Veda, these three have nothing but the name of their kind."

The system had its own advantages when it began, and disadvantages in its extreme form. It had its advantages in that it was a great and effective scheme for obtaining social control and order, and for division of labor. Particular castes took up particular problems, and as time passed they became most proficient, and attained the highest points ever reached by human beings under those conditions. Whether this was due to mental inheritance or environment, or both, it is hard to judge. The defect is that it gave no chance to healthy competition. However, it was a time when there were no good forms of communication and transportation, and in such a case whether competition would have been at all general is problematical. Many of those old arts and industries have died out owing to this segregation. The fall of the nation was also due to a lack of unity caused by these rigid caste institutions. However, there must be something inherent in the nation that has kept up its identity inspite of about ten centuries of foreign rule, and with the advantage that it is now getting through the Western influences, which are loosening the rigidity, it may some day rise to the occasion, as it did in the past.

Ultimate results.

Megasthenes, who visited India and lived at the court of Chandragupta in the fourth century B. C., says that there were schools suited to various castes and professions, and gives a clear account of what he saw about the life and condition of the people. He says that the Indians did not use even aliens as slaves, much less countrymen of their own. This shows that at that time, though there were castes, the so-called lower castes of to-day were not treated as such. They were neither used as slaves, nor looked down upon, as was done in later ages. Old people were not

Account by Megasthenes.

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given any special privileges unless they possessed superior wisdom. There are several recorded examples where even old men have bent their heads before young intellectual and wise men, thus showing their respect for learning. Writing was known according to the evidence of Nearchos in this period, though Megasthenes says that people were ignorant of the art of writing. His conclusions may be due to the fact that it was in very little use either in schools, where most of the education was imparted by rote, or in courts, where laws were administered from memory. However, there are sufficient evidences to support Nearcho's view. Many descriptions of Megasthenes show that arts and industries were highly developed. No such instruction was given in schools. All was gained through the apprenticeship method, and most of it was handed down from father to son.

This was also the epoch of the six different schools of Philosophy. Kapila—the Descartes of India, gave the first recorded system of Philosophy in the world. It is the earliest attempt on record to give a reasonable answer to the mysterious questions which arise in every thoughtful mind about the origin of the world, the nature and relations of man, and about his future destiny. Kapila says that Nature and Soul are eternal, and self-existant. Everything except Soul is derived from nature—primordial matter, and is therefore material. "The five senses simply observe, i. e. receive impressions; the five organs of action act according to their functions. The mind is not what is implied by the English word, but is only a sense organ; it sithe *sensorium commune*, merely arranging the impressions and presenting them to consciousness. Consciousness individualizes these impressionsas 'mine', while the intellect distinguishes, discriminates, and forms them into ideas. It will thus be seen that the distinctions made among the senses, the manas, or mind, the consciousness, and the intellect, are real distinc-

Six systems of Philosophy.

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tions in the functions of the mind. In the language of the European Philosophy the manas or mind receives the sensations and makes them actual perceptions; consciousness individualizes them as 'mine', and intellect turns individualized perceptions into 'concepts or judgments' in the language of Sir W. Hamilton." (1)

Kapila was an agnostic, and to counteract these effects arose the Patanjali's School of Yoga Philosophy. This has taken all from Kapila's Philosophy, and blended with it the idea of Supreme Deity.

Then came Gautama—the Aristotle of India, whose system of Nyaya Philosophy contains the Hindu logic. The Syllogism consists of five parts, "(1) the proposition, (2) the reason, (3) the instance, (4) the application of the reason, and (5) the conclusion. To illustrate: (1) the hill is fiery, (2) for it smokes; (3) whatever smokes is fiery, as a kitchen; (4) the hill is smoking, (5) therefore it is fiery." (2) This can be transformed into Aristotle's Syllogism if the first two or the last two are dropped. Comparing dates it is said by many scholars that the Hindus invented Logic, and the Greeks perfected it. Gautama also takes for his bases Kapila's system, and adds, "that this Supreme Soul is one, the seat of eternal knowledge, and the maker and former of all things. The body is earthly, the five external senses are also material, and the mind is the origin of the senses. Intellect is two-fold, including memory and concept. A concept is true if derived from clear proof, and is wrong if not derived from proof. Similarly memory may be right or wrong." (3)

Next Kanada brought forward his atomic philosophy supplementing Gautama's logic. His cardinal principle is " that all material substances are aggregates of atoms. The atoms are eternal, the aggregates only are perishable

(1) Dutt, R.C. Early Hindu Civilisation p. 279
(2) , ,, ,, ,, p. 291
(3) ,, ,, ,, ,, p. 291

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by disintegration." (1) It is physics more than philosophy. It was the first attempt made in India to inquire into the laws of matter and force, of combination and disintegration.

Jaimini's Purva Mimansa followed. He urges the consideration of duty without caring for any to whom it may be due. This philosophy is considered as agnostic, as God is not deducible from it.

Therefore a supplement to it came out in Vyasa's Uttara Minansa, or Vedanta. These two schools taken together represent orthodox Vedic Hinduism. The two taken together are an answer to Buddhist heretics who ignored Vedic rites and ignored a Supreme Being. They form the basis of true Hinduism.

The student in the Parishad received instruction in these systems of philosophy, including logic, psychology, the science of numbers, the evolution theory of Kapila, the atomic theory of Kanada, the science of thought, metaphysics and the Monistic science, and the philosophy of Vedanta. Arithmetic, algebra, geometry, trigonometry, decimal notation, and astronomy were used.

4. BUDDHISTIC PERIOD. (320 B. C.-500 A. D.)

Influence of Alexander.

Alexander came and went and left very little impression behind. India was not Hellenized. She continued to live her life of 'splendid isolation' and soon forgot the passing of the Macedonian storm.

> "The East bowed low before the blast
> In patient, deep disdain;
> She let the legions thunder past,
> And plunged in thought again." (2)

Vincent Smith says, "The East has seldom shown

(1) Dutt, R. C. Early Hindu Civilisation, p. 293
(2) Arnold, Matthew, Poetical Works of, p.

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much readiness to learn from the West, and when Indians have condescended, as in the case of relief sculpture and the drama, to borrow ideas from European teachers, the thing borrowed has been so cleverly disguised in native trappings that the originality of the Indian imitators is stoutly maintained even by acute and learned critics."(*a*)

Seats of learning.

Taxila had become famous as the seat of Hindu learning. Brahmins, merchants and all sent their sons for the study of arts and sciences, as to a university town. Ujjain was also well known, and was the head-quarters of Hindu astronomy. Longitudes were computed from its meridian.

Ashoka and his work. 260-22 B.C.

During this period lived the great emperor Ashoka. He gave happiness and peace to the people. He declared that the "chiefest conquest is that won by the Law of Piety, and he begs his descendents to rid themselves of the popular notion that conquest by arms is the duty of kings ; and even if they should find themselves engaged in warfare, he reminds them that they might still find pleasure in patience and gentleness, and should regard as the only true conquest that which is effected through the Laws of Piety."(1) It was his life work "to employ his unlimited autocratic power over a vast empire in teaching, propagation and enforcement of ethical system which he called the Law of Piety, and had learned chiefly from his Buddhist instructors."(2)

He inscribed several edicts on rocks in various parts of his dominions. These edicts "(1) prohibited the slaugeter of animals; (2)provided medical aid for men and animals; (3) enjoined a quinquennial religious celebration; (4) made

(*a*) Vincent Smith, A.V.W. Jackson, History of India, Vol. 2, p. 216.
(1), (2), Vencent Smith, in A. V. W. Jackson, History of India, Vol. -, p. 135.

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an announcement of religious grace; (5) appointed ministers of religion and missionaries; (6) appointed moral instructors to take cognizance of the conduct of the people; (7) proclaimed universal religious toleration; (8) recommended pious enjoyments in preference to sensual amusements; (9) expatiated on the merits of imparting religious instruction and moral advice; (10) extolled true heroism and glory founded in spreading true religion; (11) declared the imparting of religious instruction as the best of all kinds of charity; (12) proclaimed his desire to convert all unbelievers on the principles of universal toleration and moral persuasion; (13) mentioned the conquest of Kalinga and the names of five Greek kings, his contemporaries, to whose kingdoms as well as to various parts of India where he had sent Buddhist missionaries, and (14) summed up the foregoing with some remarks on the engraving of the edicts." (1)

Besides these there were eight edicts inscribed on eight pillars in which he "(1) directed his officers of religion to work with zeal and pious anxiety; (2) explained religion to be mercy, charity, truth and purity; (3) inculcated self-questioning and the avoidance of sins; (4) entrusted the religious instruction of the people to officers of state; (5) prohibited the slaughter of various animals; (6) proclaimed his good-will to his subjects, and hoped for the conversion of all sects; (7) hoped that his edicts and exhortations would lead men to the right path; and (8) recounted his works of public utility and enjoined the conversion of the people by moral persuasion."(1)

Kanishka.

Kanishka, the next great emperor of this period, in the beginning of the second century after Christ, called a council, like that of Ashoka, to compile and expurgate the Buddhist scriptures.

(1) Dutt, R.C. Civilisation in the Buddhist Age, p. 99.

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Some say it prepared only elaborate commentaries on the three "pitakas." In this time there was a monastery near modern Peshawar, which continued to impart Buddhist education as late as the ninth or tenth century, where Prince Vir Deva of Magadha was sent for instruction. It was probably demolished through Mahomedan invasions.

In the first part of the fourth century Fa-hien, the Chinese pilgrim, visited India. He talks of "the two monasteries, near a great stupa, ascribed to Ashoka at Pataliputra-one occupied by followers of Mahayana, and the other by those of the Hinayana sect. The monks resident in both together numbered six or seven hundred, and were so famous for learning that their lectures were frequented by students and inquirers from all quarters.

Fa-hien's account. About 400 A.D.

"Charitable institutions are numerous, rest-houses for travellers are provided on highways, and the capital possesses an exellent free hospital endowed by benevolent and educated citizens. Hither come all poor or helpless patients suffering from all kinds of infirmities. They are well taken care of, and a doctor attends them, food and medicine being supplied according to their wants. Thus they are made quite comfortable, and when they are well they may go away."[1] The earliest hospital in Europe is said to have been opened in the tenth century.

During this period geometry fell into disuse, and algebra took its place. Tho science of algebra, indeed, received a remarkable degree of development in India; the application of algebra to astronomical investigations and to geometrical demonstrations is a peculiar invention of the Hindus; and their manner of conducting

Advancement learning.

1. Vincent Smith in A. V. W. Jackson, History of India. Vol. 2. pp. 267-8.

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it has received the admiration of modern European mathematicians. Sanskrit began to lose its grip. Masses were speaking another language, in several dialects, derived from Sanskrit, and not differing much from each other. Written language was used a good deal. The Hindu alphabet, it has been proved by many scholars, is a purely local invention as evidenced by the fact that it differs from the alphabet of all the surrounding countries. In many places instruction was given in these dialects. Ayurveda, or medical science and chemistry, were taught. Charaka's work on medicine, and Sushruta's work on surgery were greatly used. Charaka's work treats of medicines, diseases, and epidemics, of the nature of the soul, of the organs and their functions, of the body and its various diseases, and lastly of emetics, purgatives, antidotes, various kinds of injections, etc. Sushruta's work treats of surgical operations, of the symptoms of various diseases, of the structure of the body, puberty, conception and growth of wounds, ulcers, fractures, and midwifery, and of antidotes and special diseases. Dr. Royly says, "It will no doubt excite some surprise to find among the operations of those ancient surgeons those of lithotomy, and extraction of foetus-ex-utero, and that no less than one hundred and twenty-seven surgical instruments are described in their works."[1]

The social code given by some of the Buddhistic writings can give some idea of education.

"I. DUTIES OF PARENTS AND CHILDREN.

'*Parent should*:

1. Restrain their children from vice.
2. Train them in virtue.
3. Have them taught in Arts and Sciences.

1 Royla, J. F. Antiquity of Hindu Medicine. p. 49

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4. Provide them with suitable wives or husbands.
5. Give them their inheritance.

"*The child should say*:

1. I will support them who supported me.
2. I will perform family duties incumbent on them.
3. I will guard their property.
4. I will make myself worthy to be their heir.
5. When they are gone I will honor their memory."

"II. PUPILS AND TEACHERS.

"*The pupils should honor their teachers*,

1. By rising in their presence.
2. By ministering to them.
3. By obeying them.
4. By supplying their wants.
5. By attention to instruction.

"*The teacher should show his affection to his pupils*,

1. By training them in all that is good.
2. By teaching them to hold knowledge fast.
3. By instruction in Science and Lore.
4. By speaking well of them to their friends and companions.
5. By guarding them from danger."[1]

5. PURANIC AGE. (A. D. 500-800.)

Up to this period the foreigners had been coming to India, but they were assimilated. After the Christian era, and after the begining of this period, foreigners began to pour into the country in greater numbers and to preserve their idtenity.

1 Dutt, R. C. Civilisation in the Buddhist Age, p. 56.

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In this period, Nalanda was the location of the greatest Buddhist monastery and university of India for many centuries. Hiuen Tsang who stayed in the convent of Nalanda with the Raja of Kamarupa, says, "The day is not sufficient for asking and answering profound questions. From morning till night they engage in discussion. The old and the young mutually help one another. Those who cannot discuss questions out of the Tripitaka are little esteemed, and are obliged to hide themselves for shame. Learned men from different cities, on this account, who desire to acquire quickly a renown in discussion, come here in multitudes to settle their doubts, and then the streams o their wisdom spread far and wide."[1] Dr. Fergusson justly says that what Cluny and Clairvaux were to France in the Middle Ages, Nalanda was to India, the depository of true learning, the centre from which it spread over to other lands.

Seats of learning.

Vikramaditya, the king of Ujjain is to the Hindus what Charlemagne is to the French, and what Alfred is to the English, what Ashoka is to the Buddhists, and what Harun-Al-Rashid is to the Mahomedans. He was the greatest benefactor of the people, and a great supporter of learning. His court had a galaxy of learned men. And the best productions in literature were the works of his protegees. Every Hindu knows the verse naming the nine gems of Vikrama's court, viz: Dhanvantari, Kshapanaka, Amara Sinha, Sanku, Vetalabhatta, Ghatakarpara, Kalidas, Varahamihir, and Vararuchi. Vikrama had in his court men belonging to both the religions, the Buddhists and the orthodox Hindus. Amara Sinha, who was a Buddhist, compiled the best known dictionary in Sans-

Vikramaditya 500-550 A. D.

1 Dutt, R. C. Later Hindu Civilisation. p. 28.

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krit, called Amara Kosha. It was translated into Chinese in the sixth century. Kalidas the Shakespeare of India, the author of Shakuntala and various other works, was also at Vikrama's court.[1] Dhanvantari was a famous physician and Vararuchi a well known grammarian.

Arya Bhatta.

Arya Bhatta, the Newton of India, was born in 476. He explained the theory of the revolution of the earth on its own axis, saying that as a person in a vessel, while sailing forward, sees stationary objects moving backward, in the same manner do the stars, though fixed, seem to move due west. He also explains the true causes of solar and lunar eclipses and other astronomical phenomena. His estimates of the earth's diameter and area are not very wide of the mark. He believed in the helio-centric theory now assigned to Copernicus, who flourished ten centuries after Arya Bhatta. He writes about the attraction of the earth (the centre of gravity), the apparent revolution of the sun and the real annual revolution of the earth, the ellipticity of the orbits of the earth and other planets, the effect of atmospheric refraction on the rising and the setting of the heavenly bodies, and Ayanachalana, or the precession of tha equinoxes. He was followed by Varahmihir, another great astronomer of the time. The succession was continued by the astronomer Brahamagupta, who wrote in 628 A.D.

Harsha.

Shiladitya II, known as Shri Harsha (606-648 A.D.), was the greatest ruler after Vikramaditya. Vincent Smith, while speaking of his times, says, "Education evidently was diffused widely, especially among the Brahmans, and numerous Buddhist monks; and learning was honored by the government. King Harsha was not only a liberal patron of

1 Some scholars, however, uphold the theory that Kalidas lived in the first century, and Vikrama whom he describes in his works was another king of the same name.

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literary merits, but was himself an accomplished calligraphist and an author of reputation. Besides a grammatical work, three Sanskrit plays are ascribed to his pen, and there is no reason for hesitating to believe that he had at least a large share in their composition, for royal authors were not uncommon in ancient India. One of these plays, Nagananda, which has an edifying Buddhist, legand for its subject, is considered to rank among the best works of the Indian theatre, and the other dramas, the Ratnavali, or 'Necklace,' and the Priyadarshika, or 'Gracious Lady,' although lacking in originality, are praised highly for their simplicity both of thought and expression. The greatest ornament of the literary circle at his court was the Brahman Bana."[1] The poet Dandin was also an early contemporary. Harsha followed Ashoka in preserving perfect tolerance and did not lean either towards Brahmanism or Buddhism.

Position of Women.

Shri Harsha's widowed sister, who was of exceptional attainments, and who was learned in the doctrines of the Sammitiya school of Buddhism, sat by his side to hear the lectures given by 'the Master of the Law' (Hiuen Tsang), and frankly expressed the pleasure which she received from the discourse. At this time women enjoyed considerable freedom. Girls learned to read and write. Several knew the use of Sanskrit. Music was considered a female accomplishment. Dancing and painting were also taught to girls before they were married.

Education as described by Hiuen Tsang.

Hiuen Tsang who spent several years in India, gives a very interesting and elaborate account of education. He left China in 629 A. D., and after traveling in India for many years returned to China in 645 A. D. According to his account, the Hindus began educating their children at a very early age. They

[1] Vincent Smith in A. V. W. Jackson, History of India, Vol. 2, P. 308.

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started with the 'Twelve Chapters' (Siddhavastu). After the age of seven the children were instructed in the 'Five Sciences,' viz. (1) Shabda Vidya or grammer, (2) Shilpas than Vidya or the science of arts and mechanics, (3) Chikitsa Vidya or the science of medicine, (4) Hetu Vidya or logic, and (5) Adhyatma Vidya or the science of gaining self-knowledge. The Brahmans used to study the Vedas in addition. The teacher had a thorough knowledge of these subjects. The students finished their education when about thirty years old. They considered ir to be their first duty to repay their master for his kindness. Some, though rich, preferring to live as mendicants, retired from active contact with the world and led lives of self-abnegation, carding neither for fame nor for contempt, They visited those who had acquired the highest spiritual knowledge, and through their help, attained the knowledge themselves. The people and the rulers honored them highly. There were eighteen schools representing the doctrine of Buddha, with different interpretations. Several believed in meditation and devoted themselves to the attainment of wisdom and spiritual insight. While doing this they either kept on walking, standing still, o sitting down. Respect was given in proportion to the knowledge one possessed. One who could explain one class of Buddhist books was exempt from the control of the monastery. One that knew two classes, received the honors of a superior. He who could explain three classes had servants to wait upon him and to obey his orders. One who could explain four classes had 'pure men' as his attendants. He who knew five classes of books was allowed an elephant and a carriage, and he who had mastered six was allowed an escort. One who reached the highest distinction had a right to call an assembly for discussion of the treatises, and had a right to praise the clever

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and reprove the faulty. In such an assembly, if one distinguished himself by fine language, subtle investigation, eloquent diction, and accurate reasoning, he was mounted on a richly caparisoned elephant and was carried by many followers to the gates of the monastery. On the other hand, one who violated the rules of debate, and did not behave in the assembly, was covered with dirt and ashes and left in a ditch.[24]

6 MEDIAEVAL OR MAHOMEDAN PERIOD. (800 A.D.–1761 A.D.)

The sacrifice preached in the Upanishads was the Sacrifice of the Self in which 'the soul is the performer; the heart, the seat of the sacrificial fires; sensual desires, the Ghee (butter); anger, the sacrificial lamb; contemplations, fire ; the period of sacrifice, as long as life lasts; whatever is eaten, is sacrificial rice; whatever is drunk, is the Soma drink; and death is the sacred bath concluding the ceremony.' This spirits was practically manifested in the teachings of Buddha. And Buddhism became the strongest, all-prevading force in the country. Nevertheless the Brahmanical faith still survived, and when Buddhism began to degenerate, the Brahmanical reaction commenced. This can be traced from even before Fa-hien's time. There was a new turn towards the use of Sanskrit, and the Revival began with its diffusion. "Gross idolatry in practice, formal atheism in doctrine, a regular army of monks and nuns everywhere eating up the substance of the industrious and charged with the worst evils of decayed monasticism, were only a few of the bad features of declining Budduism. The Brahmans at length felt that the time had come for them to use the

24 Vincent Smith, in A. V. W. Jackson, History os India, p.p. 134-143.

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logic and rhetoric of the Buddhists against themselves, and they began to do it effectively."[1]

Shankaracharya and revival of Hinduism.

Among the new Hindu missionaries, the formost were Kumarila Bhatta, and the famous Shankaracharya, known afterwards as Jagatguru (the preceptor of the world.) He defeated in discussion Mandana Misra, the chief Pandit at the court of Mahishmati. Mandana's wife Bharati, whose learning and accomplishments were vast and many-sided, acted as the umpire. This was an age when education of women was common and they enjoyed great freedom. It was due to the Buddhists, who educated women for the profession of religion, and sent them as nuns and peripatetic preachers even to distant countries. Sangamitta was thus sent to Ceylon.

Shankar (born about 788 A. D.) preached his new interpretation of Hinduism, and obtained remarkable success within his short life of thirtytwo years. In the words of Miss M. E. Noble, known to India as Sister Nivedita, "Western people can hardly imagine a personality like that of Shankaracharya. In the course of a few years to have nominated the founder of no less than ten great religious orders, of which four have fully retained their prestige to the present day; to have acquired such a mass of Sanskrit learning as to create a distinct philosophy, and impress himself on the scholarly imagination of India, is a pre-eminence that twelve hundred years have not sufficed to shake; to have written poems whose grandeur makes them unmistakable, even to foreign and unlearned ears; and at the same time to have lived with his disciples in all the radiant love and simple pathos of the saints-this is the greatness that we must appreciate but cannot understand. We contemplate with wonder and delight, the devotion of Francis of Assisi, the intellect of Abelard,

1 Aiyar, C. N. Krishnasami, Sri Shankaracharya. p. 9.

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the virile force and freedom of Martin Luther, and the political efficiency of Ignatius Loyola; but who could imagine all these united in one person."[1]

Incoming of the Mahomedans.

The religious revival brought about disunion of the inhabitants, jealousies of race and creed, and religious cruelties in the country. Its peace was lost. The next two centuries were a period of complete confusion and darkness, and during that time Mahomedans began to pour into the country. It being a period of internal warfare, the new race took advantage of the situation, obtained the mastery of the country and retained it for centuries. However, they began to make India their home from the thirteenth century. There are no regular records about education, but some remarks and descriptions here and there of the chroniclers, give some clue.

Bhaskaracharya.

The great mathematician Bhaskaracharya was born in 1114. He finished his great work Siddhanta Shiromani in 1150. This work contains Bijaganita (algebra) and Lilavati (arithmetic), which have been translated by Colebrooke; and Goladhyaya (spherical trigonometry) which has been translated by Wilkinson and revised by the well-known mathematician Pandit Bapudeva Shastri.

Firoz.

King Firoz III (1351-1388) gives his own account in his memoirs, where he says, "Among the gifts which God bestowed upon me, His humble servant, was desire to erect public buildings. So I built many mosques and colleges and monasteries, that the learned and the elders, the devout and the holy, might worship God in these edifices and aid the kind builder with their prayers. The Madrasa (college) of Sultan Shams-ad-din Altamish had been destroyed. I rebuilt it and furnished it with sandalwood

1 Aiyar, C. N. Shri Shadkaracharya, Preface p. 5.

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doors. The expence of repairing and renewing these tombs and colleges was provided from their ancient endowments. In those cases where no endowments had been settled, I made provision that these establishments might forever be secure of an income. I was enabled by God's help to build a Dar-ashshifa, or hospital for the benefit of every one of high or low degree who was suddenly attacked by illness, and overcome by suffering. Physicians attended there to diagnose the disease, to look after the cure, to regulate the diet, and to give medicine. The cost of the medicines and the food is defrayed from my endowments. All sick persons, residents and travelers, gentle and simple, bond and free, resort thither; their maladies are treated, and, under God's blessing, they are cured."[1]

During his time the slaves were well educated at court, and trained either for the army, for palace employment, or for mechanical trades. There were forty thousand of them on guard at the palace, twelve thousand artisans in Delhi, and altogether not less than one huudred and eighty thousand slaves were supported by the government.

Khavandamir in his Humayun Namah describes the three classes of all the officers and inhabitants, the second being that of the divines, the holy-men, the Sayyids, the scholars, the officers of law, the scientists, the poets and other great and respectable men. Humayun (1530–1556) set aside Saturdays and Thursdays[2] every week to receive their visits, because Saturday is ascribed to Saturn, who is the protector of good and religious men and persons of old families; while Thursday is appropriated to Jupiter, who is the preserver of Sayyids, scholars, and the strict followers of the Moslem.

Humayun.

1 Elliot, in A. V W. Jackson, History of India. Vol. 5. pp. 164-169.

2 The Mahomedan Sabbath falls on Friday. Thus Saturday is the first day of the week and Thursday the last.

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Akbar, the great contemporary of Queen Elizabeth, learnt the mystical doctrines of the Persian Sufis from Faizi and Abu-l-Fazl. He showed the greatest interest in real learning, while conversing with scholars and philosophers. He had a fine rich library, and took great delight in reading. He encouraged debates on doctrinal and philosophical questions, and eagerly listened to the discussions. In these discussions were generally present Vedanta Philosophers or Yogis, Christian fathers, Mahomedan priests and representatives of various religions. He had versions of Sanskrit classics made for him, and he ordered a translation of the Gospels of Christ. He studied alchemy, and astronomy; and encouraged art and painting. He encouraged and allowed the Hindus to compete for the highest honors and employed them according to their merits. He had with him Todar Mal, the greatest Hindu financier, who reconstructed the revenue system and ordered that all the accounts should be kept in Persian. It was probably due to this that before the close of the eighteenth century, Hindus had almost become the Persian teachers of the Mahomedans.

Akbar. (1556–1605.)

Mohammed Baka, the chronicler of Aurangzib's times, writes: "The emperor is perfectly acquainted with the commentaries, traditions, and law, and one of the greatest excellencies of this virtuous monarch is that he has learned the Koran by heart. In his early youth he had committed to memory some chapters of that sacred book, but he learnt the whole by heart after he ascended the throne, taking great pains and showing much perseverance in impressing it upon his mind. He writes a very elegant Arabic hand, and has acquired perfection in this art. He made two copies of the holy book with his own

Aurangzib. (1658–1707).

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hand, and having finished and adorned them with ornaments and marginal lines at the expense of seven thousand rupees, he sent them to the holy cities of Mecca and Medina. He also writes an excellent Persian hand, and besides being a very elegant stylist in prose, he has acquired proficiency in versification. In obedience to the words of God, 'Poets deal in falsehoods,' however, he abstains from writing poetry, nor does he care to hear verses except those which contain a moral.

"The emperor has given a very liberal education to his fortunate and noble children, who have attained the zenith of perfection by virtue of his attention and care, and have made marvellous progress in rectitude, devotion, and piety, and in learning the manners and customs of princes and great men. Through his instruction they have memorized the Book of God, obtained proficiency in the sciences and in polite literature, acquired the art of writing and various Arabic scripts, and learned the Turkish and Persian languages.

"In like manner, the ladies of the household have learned the fundamental and necessary tenets of religion in obedience to his command, and all devote their time to the adoration and worship of the Deity, to reading the sacred Koran, and to the performance of virtuous and pious acts. The excellence of character and the purity of morals of this holy monarch are beyond all expression. As long as nature nourishes the trees of existence and keeps the garden of the world fresh, so long may the plant of prosperity of this preserver of the garden of dignity and honor continue fruitful and abundant."[1]

Aurangzib is said to have planned and established the state system of education. However, if it was introduced at all, it does not seem to have outlived its origi-

1 Elliot, in A. V. W. Jackson, History of India, Vol. 5. pp. 338-339.

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nator. He stopped music and dancing since they were not in conformity with his strict observance of the Moslem religion.

Condition of education.

Although this was a period of persecutions, tyrannies and internal struggles, kings promoted education, but no great state help was given to eduction in general. There were Pathshalas, or Hindu elementary schools, where 'the three R's' were taught. Tols or Hindu schools of learning were entirely independent of the Pathshalas. The pupils that attended the Tols obtained the necessary elementary education at home. The pupils and the teachers were very simple in their manners, and according to Mr. Adams several of these men were "adepts in the subtleties of the profoundest grammar of what is probably the most philosophical language in existence; not only practically skilled in the niceties of its usage, but also in the principles of its structure; familiar with all the varieties and applications of their national laws and literature, and indulging in the abstrusest and most interesting disquisitions in logical and ethical philosophy. They are in general shrewd, discriminating and mild in their demeanor. The modesty of their character does not exist in abjectness to a supposed or official superior, but is equally shown to each other. I have observed some of the worthiest speak with unaffected humility of their own pretensions to learning, with admiration of the learning of a stranger and countryman who was present, with high respect of the learning of a townsman who happenes to be absent, and with just praise of the learning of another townsman after he had retired, although in his presence they were silent respecting his attainments."[1] Education was given gratis, and

1 Thomas, F. W. The History and Prospects of British Education in India, p. 8.

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the institutions were maintained by presents from the people, the village, or the kings. Students coming from a distance were provided with food, lodging, and clothing. The course of study was of twenty years or more, with long vacations.

THE CURRICULUM WAS :

School of Literature—Grammar, lexicology, rhetoric, poetry and drama.

School of Law—Sacred books of law with disputations and commentaries.

School of Logic—Formal and material logic, metaphysics, and religion.

School of Vedanta—Texts and commentaries of Vedantic philosophy.

School of Puranas—Mythological poems.

School of Tantras—Works on rituals.

School of Medicine—Works of Sushruta, Charaka, and Vagabhatta.

First the text books and then the commentaries were studied. The arguments of one party were given, and then they were refuted.

There were Mahomedan elementary schools, generally attached to the mosques where the Koran was taught. Instruction was also given in Persian poetry, letter writing, rhetoric, theology, and medicine. Persian was the court language, and so these schools had their own value. Nearly half of the number of students were Hindus. The advanced schools or the Mahomedan schools of learning used the Arabic language. Courses were offered in rhetoric, logic, law, ritual, theology, and the Koran. Euclid and Ptolemy's astronomy were known in translations. Natural philosophy and reputed works of metaphysics were studied.

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No education was given to girls. However, daughters of Rajput kings, nobles, and land-owners often received a limited commercial and religious tioencadu from their fathers and family priests. Women lost all their independence owing to the mastery of the country by the Mahomedans, whose ideals and morals were quite different, and many times revolting to the Hindus. But to preserve the Hindu name, people changed their customs and manners. Whether this was a wise step or not, it is at least certain that had they not changed, the whole nation might have been Mahomedanized.

Position of Women.

7. MODERN OR BRITISH PERIOD (1761-)

The oldest invasions, that of Alexander and perhaps even the incoming of the Aryans into India, were due to military enthusiasm and the desire for territorial gains. The Mahomedans in the Middle Ages entered the country with additional religious zeal, with the idea of converting the non-Moslems. In the end of the fifteenth century' when the Mahomedans were not even completely esta blished, the doors of India were opened to a new people, who held another additional idea of commercial gain. India, about which Pliny said, "In no year does India drain our Empire of less than fifty-five millions of sesterces (S2,290,000) giving back her own wares in exchange, which are sold at one hundred times their prime cost," became a dreamland to the Europeans, when their commerce was monopolized by the Arab traders. This made the Europeans strive hard to find a new route to India. Their success in this attempt turned a new leaf in the history of the world.

Advent of the Europeans.

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The Portuguese, the Dutch, the English and the French began to trade and fight amongst themselves.

Success of the British.

The French and the English were struggling for the supremacy at the time when the Hindus were making a united effort to overpower the Mahomedans. A cry of Hindustan for the Hindus was raised. When the Christian nations of Europe were contending with each other, an idea of national and religious unity pervaded India, a country vast in size, equal to the whole of Europe excepting Russia. Had the Hindus been successfuls perhaps the history of world would have been changed. Their failure in this attempt weakened them, and the English succeeded in getting hold of the country. God perhaps ordained it for a better purpose, for the rapid advancement of the new civilization.

The earliest efforts in new education date from the coming of the Europeans. Danish missionaries began the work, and by the end of the eighteenth century, there were three mission societies in the field.

Early efforts in education.

The start in education by the Government was made in 1781 when Warren Hastings founded a Madrasa.[1] The first government project for education began in 1784 with the establishment of English schools for the higher classe. in Madras. In the same year an Arabic college was started in Calcutta with the intention of promoting sympathetic intercourse between the English and the Indians. The Sanskrit college at Benares was founded in 1791. Thus the first attempts began with Oriental education. Charles Grant, a member of the Court of Directors of the East India Company, was the first to suggest to the court (1797) the idea of introducing English education in order to ameliorate the demoralized condition of the people of India.

1 The Mahomedan name for "school."

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It was in 1813 that Parliament saw that it was their duty to give good education to the people of India, and resolved that a sum of not less than one hundred thousond rupees, that is about a 32,000 [1] should be set apart each year for founding colleges, schools, etc. However, for ten years following, nothing was done to carry out the orders of Parliament.

Education recognized by Parliament.

The proposal to open a Sanskrit college was vigorously opposed by Raja Ram Mohan Roy, a learned Hindu. He showed the futility of the old method of education and the need of English education. In his protest, addressed to Lord Amherst, he wrote: "We find that the government is establishing a Sanskrit school under Hindu Pandits to impart such knowledge as is already current in India. This seminary (similar in character to those which existed in Europe before the time of Lord Bacon) can only be expected to load the minds of youth with grammatical niceties and metaphysical distinctions of little or no practical use to the possessor or to society. The pupils will there acquire what was known 2000 years ago, with the addition of vain and empty subtleties since produced by speculative men, such as is already taught in all parts of India. In order to enable your Lordship to appreciate the utility of encouraging such imaginary learning as above characterized, I beg your Lordship will be pleased to compare the state of science and literature in Europe before the time of Lord Bacon with the progress of knowledge made since he wrote. If it had been intended to keep the Btitish nation in ignorance of real knowledge, the Baconian philosophy would not have been allowed to displace the system of the schoolmen, which was the best calculated to keep this country in darkness, if such had been the policy of the British legislature. But

1 A Rupee is equivalent to thirty-two cents.

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as the improvement of the native population is the object of Government, it will consequently promote a more liberal system of instruction, embracing mathematics, natural philosophy, chemistry, anatomy, with other useful sciences which may be accomplished with the sum proposed, by employing a few gentlemen of talents and learning, educated in Europe, and providing a college with the necessary books, instruments and other appliances."[1] Through his efforts and the assistance of some Europeans a Hindu college was opened on January 20th, 1817. In 1823, a Committee of Public Instruction was appointed and money was granted.

Extent of Education before the British.

It would be well to look into the condition of the then existing education, when the English began the work on a new basis. At that time there were many elementary schools supported by the people themselves, as the British investigations in the beginning of the nineteenth century show full well. Sir Thomas Munroe, Governor of Madras, in his report of 1826 says:

"It appears that the number of schools and what are called colleges in the territories under this Presidency, amount to 12,498, and the population 12,850,941; so that there is one school to every one thousand of the population; but as only a very few females are taught in schools, we may reckon one school to every five hundred of the population.....I am inclined to estimate the portion of the whole population who receive school education to be nearer one-third than one-fourth of the whole .....The state of education exhibited, low as it is, compared with that of our own country, is higher than it was in most European countries at no very distant times."[2]

1 James, H. R. Education and Statesmanship in India. p. 27.
2 Chamberlain, W. I. Education in India. p. 18

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Lord Elphinstone reports for Bombay in 1832: "It appears that, in the British territories dependent on Bombay, containing a population of 4,681,735 souls, there are seventeen hundred and five schools, at which 35,143 scholars are receiving education. It would come to about one in eight boys of proper age being educated."[1]

Mr. Adams's results for Bengal in 1838 were: In a population of 7,789,152, there were 3,355 schools, with 41,247 scholars. In a population of 692,270 there were 2,414 children being taught at home, which, for the former population, would represent about 28,000 scholars. Of the adult male population, an average of about 5.55 per cent. could read and write. On the whole about 7.8 per cent. of the children of the school age were being taught at school, and over 5.2 per cent. at home, giving a total per cent. of 13."[2] In the whole country on an average about one boy in ten of proper age received some kind of education. In 1833 the grant was raised from 100,000 to 1,000,000 rupees.

Now arose the controversy of Oriental vs. English form of education. Lord Macaulay with his strong Minute and personality carried it in favor of English. Lord Bentink in 1835 issued his proclamation containing the following resolutions:

Controversy of Oriental vs. English form of education.

"1. That the chief aim of the educational policy of Government should be to promote a knowledge of European literature and science.

"2. That henceforth, no more stipends should be conferred, but that all existing stipends should be maintained, and all the Oriental colleges should be continued as long as the natives continued to avail themselves of them.

1 Chamberlain W. I. Education in India, p. 19

2 Thomas, F. W. The History and Prospects of British Education in India, p. 5.

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"3. That the printing of Oriental books should at once cease; and

"4. That the funds thus set free should be employed in promoting European studies, through the medium of the English language, and that the committee should at once submit to government a scheme for effecting this purpose."[2]

Thus, new schools were established where English was taught, and this was the beginning of the secondary education in India. In 1843 there were fifty-one schools and colleges, with eighty-two hundred students, among whom fifty-one hundred and thirty-two were studying English, four hundred and twenty-six Sanskrit, five hundred and seventy-two Arabic, and seven hundred and six Persian.

In 1843 Councils of Education were formed in other Presidencies. English Education received a great impetus in 1844, when Lord Hardinge ordered that government servants should be selected from the candidates who had received English education. In 1845 the Governor of the Northwest Provinces put up a plan, which set about the establishment of:

Plan of 1845.

1. An elementary school for Circles of Villages, each school to be situated in a central village, and no village to be more than one mile from the central school.

2. A middle School at the headquarters of each subdivision.

3. A high school in each Zillah or District.

When the Parliament renewed the charter of the East India Company in 1853, special attention was given to educational reforms. Sir Charles Wood, afterwards known as Viscount Halifax, formulated a scheme of education for all India, which is looked upon as a charter of

2 Thomas, F. W. The History and Prospects of British Education in India, p. 85,

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educational privilege, and which is called the despatch of 1854.

It recomended the following as the means of extending education:

Despatch of 1854.

1. The constitution of a separate Department of Administration for education.

"2. The institution of universities at Presidency towns.

"3. The establishment of institutions for the training of teachers, for all classes of schools.

"4. The maintenance of the existing government colleges and high schools, and the increase of their number when necessary.

"5. The establishment of new middle schools.

"6. Increased attention to vernacular school, indigenous or other, for elementary education.

"7. The introduction of a system of grants-in-aid.

"The English language is to be taught whenever there is a demand for it, but it is not to be substituted for the vernacular languages of the country. English is to be the medium of instruction in the higher branches, and the vernacular in the lower. Female education is to receive the frank and cordial support of the Government."[1]

Thus in 1857 were founded the Universities of Calcutta, Bombay and Madras; Punjab in 1882 and Allahabad in 1887.

The new education advanced more rapidly in Bengal than in Bombay and Madras. In 1882 a commission was

Commission of 1882

appointed by the Marquis of Ripon to examine carefully the results of the despatch of 1854 and to suggest necessary changes for further improvement. It reported

1. India, Report of the Education Commission, 1882, Summary of the Despatch of 1854.

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"that all indigenous schools, whether high or low' be recognized and encouraged, if they serve any purpose of secular education. That special encouragement be afforded to indigenous schoolmasters to under-go training. That a steady and gradual improvement be carried out with as little immediate interference with the personnel and curriculum of indigenous schools as possible. That while every branch of education can justly claim the fostering care of the State, it is desirable, in the present circumstances of the country, to declare the elementary education of the masses to be that part of educational system to which the strenuous efforts of the State should now be directed in a still larger measure than before. That the relation of the State to secondary education is different from its relation to primary education, in that the means of primary education may be provided without regard to the existence of local co-operation, while it is ordinarily expedient to provide the means of secondary education only where local co-operation is forthcoming. That the Indian graduates be more largely employed than they have hitherto been in State colleges. That an attempt be made to prepare a moral text-book based upon the fundamental principles of natural religion. That the principal, or a professor in each Government and aided college deliver to each of the college classes a series of lectures on the duties of a man and a citizen." 1

The Government approved of most of the recommendations, but rejected those about the moral text-book and the lectures on the duties of a man and a citizen.

The English education advanced very rapidly from 1882. It spread widely, but with very little change in the curriculum and methods of education. The Consequent effect upon Indian population forced the British

The Universities Commission of 1902.

1. India, Report of Education Commission, 1882.

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government to modify its policy. In September 1901, Lord Curzon held a conference at Simla to which European educational experts were invited, but the proceedings of this conference have never yet been published. On January 27th, 1902, the Universities Commission was appointed to inquire minutely into the conditions of the universities, and to suggest changes that would promote the advancement of learning. The Commission originally consisted of six members, of whom four were English officials, the fifth was a representative of the missionary interests, and the sixth a Mahomedan whose educational experience was restricted to the Nizam's state only. When the attention of the government was drawn to the fact that there was no representative of the Hindu community among the members of the Commission, the Honorable Mr. Justice Guru Das Bannerjee, who had been twice the Vice-Chancellor of the Calcutta University, was appointed on February 12th, 1902. The Commission began its sittings after that, took evidence until the end of April, and submitted the Report on June 9th, 1912. Although the Commissioners traveled from one end of the country to the other, the whole undertaking was completed in less than four months, a period very short in comparison with the eighteen months taken by the Commission of 1882. The evidence recorded by the Commission has not been published on the plea that it would involve unnecessary expense. The Commission recommended (1) the fixing of a minimum rate of college fees by the syndicate of the University, and (2) the abolition of the second grade colleges. On the curriculum side it recommended.

(1) The inclusion of the vernacular languages in the M. A. course, and of vernacular composition in the B. A. course.

(2) The abolition of French, except for female students.

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(3) The compulsory teaching of philosophy in arts courses.

(4) The abolition of compulsory history and political economy from arts courses.

(5) The abolition of science from the requirements of the matriculation examinations of the universities.

As regards the examinations, it recommended (1) that candidates must obtain forty per cent. marks in English to pass at the matriculation examinations; and (2) that the subjects for the examinations should not be numerous, and the examinations should be treated as a whole and not broken up into sections.[1]

Government's resolution of 1904.

A resolution issued by the Governor General in Council in 1904 on 'Indian Educational Policy' makes several recommendations. It says that the shortcomings of education "in point of quantity need no demonstration. Four villages out of five are without a school; three boys out of four grow up without education, and only one girl in forty attends any kind of school. In point of quality, the main charges brought against the system are to the general effect (1) that higher education is pursued with too exclusive a view of entering Government service, that its scope is thus unduly narrowed, and that those who fail to obtain employment under Government are ill-fitted for other pursuits; (2) that excessive prominence is given to examinations; (3) that the courses of study are too purely literary in character; (4) that the schools and colleges train the intelligence of the students too little, and their memory too much, so that mechanical repetition takes the place of sound learning; (5) that in the pursuit of English,

1 Natesan, G. A. Report of the Indian Universities Commission, a supplement to the Indian Review.

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education, the cultivation of the vernaculars is neglected with the result that the hope expressed in the despatch of 1854 that they would become the vehicle for diffusing Western knowledge among the masses is as far as ever from realization.[2] The resolution treats at length the questions of improvement of primary education, secondary education, university education, female education, education of Europeans and Eurasians, technical education, schools of art, industrial schools, commercial education, agricultural education, training of teachers, hostels for students, etc.

The Indian Universities Act of 1904.

The Bill amending the law relating to the universities of British India was passed in 1904. It changed the constitution of the universities altogether. According to it, the university "is governed by a senate consisting of from 75 to 100 members. The head of the Government at the seat of the university, whether he be Governor General, Governor or Lieutenant-Governor, presides over the senate as Chancellor, and nominates the V. C. ice-chancellor. Government nominates about eighty per cent. of the members of the senate, and the remainder are elected by the senate, or its faculties, or by the body of graduates of the university. Certain high officers are ex-officio members of the senate. The members of the senate are nominated or elected for a term of five years. They consist of Indians and Europeans in about equal proportions."[1]

Honorable Mr. G. K. Gokhale and other elected members of the Imperial Legislative Council opposed the passing of the Bill in every possible way. Other

2 India, Governor General in council, Indian educational Policy, pp. 6–7.

1 India, Quinquennial review of educational progress in India 1902–1907. p. 18.

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educated leaders of public opinion have shown their disapproval in public assemblies. They are of the opinion that the Bill gives a permanent monopoly of power to European educationalists, and that the Bill is a great blow to higher education.

The Government says that the graduates want government service only, and when they do not get it they become discontented. People say that their children who are educated in schools, look for government service and do not take up any independent business, nor follow their family professions. Both are right in their conclusions. But what is the cause of it, and who is at fault? The poor student studies what he gets, or what he is given. He would not seek government appointment if he were given an education that would make him fit for any independent professional or business life. The very education that is given to him is only fit to make him a clerk under the government. Neither the Government nor the people and poor, overtaxed people cannot do much along these lines—think of removing the very root of the trouble, the absence of vocational education. The discontent of the graduates was expected by Lord Ripon, one of the greatest Indian Viceroys; and he showed what policy he would pursue in such a case, in his address at the University of Bombay in 1894. He said:

Discontented Graduates.

"I am very strongly impressed with the conviction that the spread of education, and especially of Western culture, carried on as it is under the auspices of this and the other universities, imposes new and special difficulties upon the government of this country. It seems to me, I must confess, that it is little short of folly that we should throw open to increasing numbers the rich

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stores of Western learning; that we should inspire them with European ideas and bring them into the closest contact with English thought; and then, that we should, as it were, pay no heed to the growth of those aspirations which we have ourselves created, and of those ambitions which we have ourselves called forth. To my mind one of the most important, if it be also one of the most difficult, problems of the Indian Government in these days is how to afford such satisfaction to those aspirations and to those ambitions as may render the men who are animated by them, the hearty advocates and the loyal supporters of the British government."[1]

India has been and is a great battle-field of conflicting forces. One cannot say how long the conflict will last.

India's willingness to adopt civilisations other than its own.

But under the British flag, the Western industries, the Western religion, and the Western education, are playing a great part. Through them India may hope to have a finer life, even than that which she had before her decline fourteen centuries ago. Stanley Poole says: "Nine centuries of association have produced no sensible fusion between the Moslem and the Hindu, any more than two centuries of intercourse have blended either with the dominant English. There are those who believe that the contact of Western energy with Eastern thought, the infusion of European literature in the subtle Indian mind, and the reaction of the ancient philosophies of the Brahman schools upon the imagination of the West, may end in generating a new force in the world, perchance an Indian nation combining the profound speculations of the East with the progressive activities of Europe. Prophecy is no part of the historian's duty; but if any forecast may

1 Gokhale, G. K. speeches of, pp. 247–248.

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be deduced from the long period of alien rule surveyed in the preceding pages, it is not favorable to any hopes of such a consummation. The conquerors of India have come in hordes again and again, but they have scarcely touched the souls of the people. The Indian is still, in the main, what he always was, in spite of them all; and however forcible the new and unprecedented influence now at work upon an instructed minority, one can with difficulty imagine any serious change in the rooted character and time-honored instincts of the vast mass of the people, nor is it at all certain that such change would be for the better."

People who are intellectual and conscientious, cannot take up the views of others, unless they find their own wrong, and those of others right. Moreover, the Mahomedans were full of missionary zeal, and tried to convert simply by force. Their ideas about morality were quite different. This caused the Hindus to keep themselves as much aloof from the Mahomedans as possible. Now, when the religious tyranny does not exist, they are becoming as good friends as can be. They are mixing socially in the State of Baroda, with its Hindu king, and in the State of Nizam, with its Mahomedan king, and yet scarcely any trouble arises.

There are very few who are educated and very few that know English. Several of the well educated people who know English do mix, and would mix much more with the Englishman if the latter showed the Christian spirit of equality and brotherhood of mankind, and did not vaunt their political superiority. However, Poole is right in saying that this is only a minority, but he does not show how to make it a great majority. It

1 Lan—Poole, in A. V. W. Jackson, History of India. Vol. 4. p. 189.

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can easily be done by universal education.

The people of India have always changed according to the times, and have assimilated ideas and institutions and practices which they thought to be the best, absolutely, or for the time being. Owing to the contact of the Mahomedans, the Hindus changed their customs and manners to a certain extent, and were also influenced in their ideals. The seclusion of women and the practice of child marriage are directly traceable to this Mahomedan influx. The rise of new sects of religion is due to new ideas received from Mahomedanism and Christianity. The present physical, social, political religious, and industrial movements, as well as the demands for compulsory and free education, are positive proofs of the changes in the mind of the people. The following chapters, also, will show how rapidly the fusion of ideas of the West with those of the East is taking place.

CHAPTER II

EXTENT OF EDUCATIONAL WORK IN BARODA.

Area and Population.

The area of the Indian Empire is nearly eighteen hundred thousand square miles, with a population of nearly three hundred million. About 38 per cent. of the area, and about 25 per cent. of the population are under the native states. Several of these states do not pay any tribute and are with certain qualifications independent of the British government in their internal management. The State of Baroda is one of them. It has an area of 8,182 square miles, inhabited by 2,032,798 people. There are 42 towns with a population of 405,017 and 3,054 villages with 1,627,781.

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Divisions of the State.

For administrative purposes, the state is divided into four large districts, viz. Baroda, Kadi, Navsari, and Amreli. Each large district is subdivided into smaller ones called Talukas, of which there are 11 in Baroda, 11 in Kadi, 8 in Navsari, and 5 in Amreli. Baroda City is always spoken of independently of these divisions. The following figures show the extent of the main divisions.

District	Area Sq. mi.	No. of towns	No of Villages	Population towns	Population villages	Total.
Baroda City	9	2		99,345		99,345
Baroda Division	1,889	14	921	83,368	504,187	587,555
K	3,023	14	1,076	138,649	693,513	832,162
Navsiar	1,914	6	762	42,221	293,246	335,467
Amreli	1,347	6	295	41,434	136,835	178,269

Early History.

The first attempts in education at the expense of the state commenced in 1871, in imitation of the similar work done by the British Government. Mr. Bhogilalbhai was called to lay the foundation of the new system; and on the 22nd of March, 1871, one high school in the City of Baroda, and four vernacular (elementary) schools, one of them being at Arambhada in Okhamandal, were opened. Mr. Bhogilalbhai acted as the headmaster of the Baroda High School and the superintendent of all other schools. The number of pupils in 1871 was 666, and the expenses incurred were 13,000 rupees (about 84,160). In 1875 the vernacular education department was put upon a separate basis and placed under Mr. Bhogilalbhai as the Director of Vernacular Instruction. The next year an additional post of Educational Inspector was created, and the choice fell upon Mr. Hargovinddasbhai. A the beginning of the next decade the

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number of schools had increased to 180, with 17,465 pupils, and a new position of Deputy Educational Inspector was sanctioned. The year of 1881 was specially noted on account of our present ruler, His Highness Sayaji Rao Gaekwar assuming the powers of administration of the state. Though he was then only eighteen years old, he had a keen insight into the working of the state, and was a great believer in the education of the masses. He has always taken a personal interest in education and its development, and has given it his full support. Mr. Bhogilalbhai retired from service in 1885 and Mr. Hargovinddasbhai succeeded him as Director of Vernacular Instruction. Two officers were added to the staff, thus putting one Educational Inspector and one Deputy Educational Inspector in charge of Baroda and Amreli districts, and similarly two officers in charge of Kadi and Navsari districts.

Mr. Bhogilalbhai an educator.

Mr. Bhogilalbhai, the father of English education in Kathiawar, and the father of education in the Baroda State, was a great pioneer of education. Though born of poor parents, through individual efforts, patience and perseverance, he made his name a household word in all Gujrat. He was one of the members of the book committee appointed by the British Government in 1859 for preparing a Reading Series for schools, which was replaced by a new series only five years ago. All who knew him found him to be a man of very liberal principles, a man who cared for the spirit and not for the letter, whose mind was bent upon educating children and not training them. On one occasion, while examining a school, he was questioning the pupils about a lesson which they had studied in a lower grade and which had a bearing upon practical life. Much to the general surprise, the best answer came from a boy whom the teacher looked

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upon as below grade. In Mr. Bhogilalbhai's estimation, this was the only pupil who really merited promotion, for he had caught the spirit of the teaching, while all the others, although they had satisfied the technical requirements, had forgotten the essence of what they studied a year or two before. While he did not devote any attention to training teachers of special subjects, yet he seems to have appreciated and encouraged specialization. He sowed the seed and it was left for his successor, Mr. Hargovinddasbhai, to rear the plant.

Further development in Education.

In 1889–90 there were 444 schools, including 35 schools for girls, teaching 40,619 boys and 3,415 girls, the money spent during the year being 431,613 Rupees, including 145,327 Rupees for college and secondary education. Two years later the administration was strengthened by making a total of twelve Deputy Educational Inspectors, on account of the new system of village schools which grew rapidly.

Village School System.

Gramya Shalas, or village schools, were opened by his Highness's order in 1891. They are a part of the village administration, and the Mehetaji, or the village school master, was recognized as one of the permanent members of the village service, his duty being to popularise education among the village people and to spread its influence even in the smallest cottages. In proportion to the number of pupils the village school master was paid from three to five rupees per month, from the revenue department. He was also allowed to receive fees in money or kind from the parents of the pupils. Besides these a certain grant was given by the education department according to the examination results.

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His Highness, together with Mr. Hargovinddasbhai and other educational authorities, saw that the old-time private schools which still existed in many villages ought to be brought under the control of the Education Department in order to make necessary changes in the methods and curriculum. The best way to bring this about was to entice the private school masters to accept positions in the new schools. The system is a great success. Within a year these schools increased to 228 in number, and for the facility of management they were entrusted to the Vernacular Education Department in 1892. According to the intentions of His Highness, the Maharaja Saheb, Mr. Hargovinddasbhai increased the staff for the further development of the system. His Highness wished to see a school wherever sixteen pupils could be gathered together. By the end of November, 1892, the number of these schools rose to 572, and by the end of November, 1893, there were 641 such schools with more than twenty-two thousand pupils.

For providing stability and better teaching, it was thought advisable to revise the scheme and give more remuneration to the teachers. Accordingly, a village school master with twenty-five pupils was paid six rupees per month and one who had a larger number was given seven. Over and above this he was given a maximum grant of from twelve to twenty rupees every year according to the general conditions of the school. In addition he continued to receive fees from the pupils. A school with more than fifty pupils was given an assistant teacher, and was put into the grades of the ordinary schools, if possible. These village schools offered instruction in three standards only, and were allowed to teach according to an abbreviated curriculum. However, now most of them follow the ordinary school curriculum and teach even higher standards.

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After such a steady growth, a period of change and unrest came upon the department. Mr. Hargovinddasbhai was transferred to the position of Military Secretary in February 1896. The department felt his loss severely, for he was one of the ablest educators and administrators Baroda has ever seen. During the period of about ten years when he was the head of the department, the school population increased by about four hundred per cent. He gave a special impetus to the education of girls, and it was during his time that Kalabhavan or the College of Arts and Industries was opened. The experiment in compulsory education which will be described hereafter was started by him. It was only because of his thorough and clear grasp of the subject, and his unflinching devotion to the cause that the experiment proved to be a success. His name will be a land mark in the history of education of the Baroda State, and will be revered by posterity. He has written a number of text books for school use, and several books on social and educational topics. He is still devoting his energies to the cause of education, and is looked upon by young educators as a cheerful gride.

Mr. Hargovinddasbhai and his work.

His successor, Mr. H. Littledale, was appointed in June 1896, to act as principal of the Baroda College and Director of Anglo-Vernacular Instruction, and Mr. J. A. Dalal took charge as the Director of Vernacular Instruction, which designation was changed to Vidyadhikari as the head of all Vernacular education by His Highness's order dated June 14, 1896. Later on the head of all English education was called Minister of Education, and the duties both of Vidyadhikari and of Minister of Education, were vested in the same person.

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The year 1897 was marked by a reduction of the lowest standards from some of the schools, owing to the establishment of grant-in-aid infant schools. These schools were entrusted with the work of teaching below standard and the first standard, i. e. the first two years' work of the elementary schools, thus doing away with similar classes from the state schools, wherever such schools were registered. However, these schools did not find favor with the people or with the officers and they were closed in due time.

Grant-in-Aid Infant Schools.

In 1899–1900 the department had 1,062 schools for boys, and 97 for girls, with 66,440 boys and 15,142 girls as pupils, the expenses during the year being 645,521 rupees. The village schools were completely put under the District Boards, who looked to their supervision and management from August 1, 1905. However, through long expereince it was thought advisable to transfer the supervision work under the education department. This has made the schools more efficient as more care is taken in the selection of the teachers. After passing through some more vicissitudes the department was placed under the present Minister of Education, Mr. Masani, in 1906. He is by nature a keen observer and takes a great interest in child life. He consults his co-workers in all educational matters. He has shown great skill and ability in administering the compulsory education law.

After long deliberation, His Highness was pleased on the 16th of March, 1893, to pass an order introducing the law of compulsory education in the Amreli Taluka, and sanctioned a sum of 31,790 Rupees for the purpose. Mr. Hargovinddasbhai, the then Director of

Compulsory Education.

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Vernacular Education, thoroughly studied the problem, and the law was first applied to the town of Amreli and nine villages, the remaining villages of the Taluka being included within the scope of its operation gradually.

The progress of this experiment was keenly watched by those interested, for several years. His Highness was much pleased with its success and was convinced of its utility. He has written and spoken at length upon this subject. He says, "It is well to recognize, however, that this is only a part of a much greater work imperatively demanded if this country is to renew its vitality, mental and material–the work of universal education; and universal education implies compulsory education.

His Highness on Education.

"The excellence of a government must, to my mind, be judged, not by separate details of its administration, but by the extent to which it gives facilities for the development of all the best human facilities in the people whose destinies it guides, and having developed them, gives the freest and amplest scope for their exercise under the conditions of a well-ordered society. It follows from this that the provision of universal education becomes the first duty of a government. In the old days, when the people were expected merely to pay taxes, to obey the law, and to till the fields, the necessity of educating them was not felt. But in these days, when more and more value is attached to public opinion, and a fuller and fuller measure of free and responsible activity is conceded to the people, universal education is needed to equip them for their new destinies and responsibilities. It is dangerous to have, in these days of democracy, an ignorant and therefore suffering populace, for such a populace is liable to be moved by the first wind of anarchy or demagoguism, nor can it now-a-days be argued that education is the lookout of the

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individual, not of the State. It is becoming an axiom of political economy that the provision of education and its supervision are in the main the duties, and the most important duties, of the State, and cannot be either economically or efficiently discharged by scattered and unorganized effort." 1

Further he goes on: "But in these days of the reign of commerce the economical argument is perhaps the most obvious and pressing. The want of education puts a man at an economical disadvantage, making him, by limitation of his field, the slave of circumstances, where the skilled brain and the skilled hand choose their own field and meet circumstances on equal terms. The loss to the nation is, if possible, still greater. For these are times of high-strung international competition, a keen struggle for markets and monopolies, huge trusts and combines, and the unlimited application of science to the practical details of commerce and industry. In such an age every additional ounce of brains may tell for an incalculable amount in the final apportionment of success and failure. That nation, therefore, is likely to outstrip its rivals, which gives the greatest educational advantages to every individual citizen without distinction of class or respect of persons. It is because in her unbounded faith in this democratic ideal, she has devoted herself to universal and free education, that America, less gifted with initial advantages than England, less scientific and nationally organized than Germany, is challenging these nations in the race for commercial supremacy. Contrast with this the stagnant condition of India, where, of all countries not barbarous, there is the most culpable waste of human material, and we have the most forcible and urgent of all arguments for uni-

1. Gaekwar, S. R. Articles on Education p.p. 87, 15 and 16.

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versal education. It is not that all can climb to the higher pinnacles of knowledge or success; but the higher the general level of enlightenment and capacity, the greater the collective force of the nation. In modern days it is not only the general commanding, but the rank and file who must have self-reliance, knowledge, and brains. Nor is it any longer either just or wise that the few in the lower classes, who may have the capacity to rise, should be denied the chance. The leader of armies or the captain of industry often arises out of the ranks." [1]

According to his desires the law of compulsory education was extended to some parts of the State in October 1906, others in February 1907, and to the remaining portions in May. It made a great stir not only in the Baroda State, but in the whole of India, and voices were raised against the necessity, and the advisability of such a step. However, other people in India have begun to see the advantages, and have ever since been asking their Local governments to grant them similar benefits. The government representatives say that they have been watching the experiment in Baroda; but to one whose eyes are open to the history of education in Baroda, it has already passed the experimental stage.

Details of the Compulsory Education Law.

The age limits for compulsory attendance have been fixed from the beginning of the seventh to the end of the twelfth year for boys, and from seven to ten for girls. The age limit for girls was raised to eleven last year. The limit of compulsion formerly ceased when the child completed the study in the third standard. This limit too was raised to the fourth standard. Ex-

1. Gaekwar, S. R. Articles on Education p.p. 17-18.

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emption from compulsory attendance is granted to the children (1) if their presence is indispensable at home owing to sickness or infirmity of the parents; (2) if it is impossible for them to learn anything on account of some physical or mental defects, and (3) if the school is more than a mile from their homes. Parents and guardians are fined up to a rupee in case the child is continuously absent for more than six days, or on the whole fifteen days in the month. In spite of this punishment, if the parents or guardians are found to take the children away from the school for some sort of labor in their own or at some other farms, they are liable to a fine of not less than one rupee and not more than five rupees per child for each offensce. Permission for absence is granted on valid reasons.

Until March 1907 fees were charged even in the elementary schools. Children studying up to the second standard paid one anna or two cents per month, those in the third and fourth, two annas, and those in the higher three annas. No fees were charged in the girls' schools, Sanskrit schools, Urdu schools, and Antyaja schools. Children of backward Hindu communities, as well as of soldiers in service, were exempted from fees. Moreover, twenty per cent. of the pupils who were unable to pay fees on account of poverty were also taught free. In October, 1906, the children who came under the compulsory law were exempted, and from April 1907 elementary education was made free in the whole state on the memorable occasion of the Silver Jubilee of His Highness the Maharaja Seheb's administration.

Recent Statistics.

During the year 1910–11 there were 3,026 schools, of which 2,678 were for boys and 348 for girls. Out of these the village schools number 1,773, (nineteen of them being exclusively for girls) with 73,890 pupils.

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The total number of pupils was 185,477, of whom 54,479 were girls. The details of the expenses for the year were:

	Rupees approximately
For English institutions	227,536
Students sent abroad	21,664
Village schools	200,445
Other Vernacular schools and institutions	933,093
Libraries	23,347
Total	1,406,085

The amount thus spent is nearly ten percent. of the total income of the state.

A comparative view of the percentages of the children receiving elementary education, and the expenses incurred for it by different countries would show the position the state occupies:

	Percentage of population receiving elementary education.	Elementary education, expense per capita of population.
United States	19.8	12 rupees
England	18.0	7·1/2 „
Scotland	16.4	7 „
Germany	16.4	7 „
Japan	11.0	7/8 „
Russia	5.0	
Philippines	5.0	
India	1.9	1/16 „
Baroda	8.1	1/2 „

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CHAPTER III

ADMINISTRATIONAL ORGANIZATION.

For centuries people in India scarcely had any voice in the administrative affairs, a condition which caused strong tendencies toward centralization. These traditions, still existing to some extent, are gradually losing ground, and more and more democratic ideas are making headway. In Baroda the ruler himself appoints all teachers and officers, who obtain fifty rupees or more as a monthly salary. Of late, however, he has been delegating many of these powers to a council consisting of the heads of different departments. The appointees are almost always from among those recommended by the Minister of Education.

Tendencies toward Centralization.

The Minister of Education is the head of all the English institutions, and Vidyadhikari is the head of all the Vernacular institutions. Both the offices are now centred in one and the same person.[1] He appoints all the head masters and other teachers whose salaries vary from twenty to fifty rupees a month. He is a man of high education and exemplary character, and is always the personal choice of the ruler.

Minister of Education and Vidyadhikari.

The principal of the Baroda College is independent of the Minister of Education in the administrative affairs of the College. He has a right to visit and inspect all the English institutions in the State. The Baroda High School is more under his control, both the College and the High School being located in the same building.

Principal of the College.

1 However, he uses both the designations, Minister of Education when he works for the English institutions, and Vidyadhikari when he works for the Vernacular institutions.

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He can make such recommendations as he deems desirable for the Baroda High School.

Each of the four districts is placed under an educational inspector who is required to inspect and examine a certain number of schools. Every year however, most of his time is taken up in administrative work. He appoints teachers with salaries varying from ten to twenty rupees a month. An inspector called Urdu Educational Inspector is appointed for the Urdu schools established for the benefit of the Mahomedan population. An inspector is also provided for the Antyaja schools, or the schools for the non-touchable class.[1] The powers of these two inspectors are limited. Almost all the inspectors are graduates of a university. There are two grades of these inspectors, the first receiving from one hundred and seventy-five to two hundred fifty rupees per month, and the second from one-hundred and twenty to one hundred and sixty, with a biennial increase in their salaries. The Urdu and Antyaja inspectors do not belong to these grades.

Educational Inspectors.

The lady superintendent and inspectress of girls' schools has the direct control over the Female Training College, the Girls' High School, and the Zenana classes. She examines and visits other girls' schools according to her convenience and the time at her disposal. A second Lady Educational Inspector is also appointed.

Lady Superintendent and Inspectrees of Girls' Schools.

1 People who clean the streets, remove dead animals, tan hides, and keep themselves unclean, form this class. The people of the higher castes never come into bodily contact with them and hence the name.

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There are twenty deputy educational inspectors who inspect the schools and examine all the children in their respective divisions. They appoint teachers who receive a monthly salary of less than ten rupees. There is a Marathi Deputy Educational Inspector for the Marathi schools, and an Urdu inspector for the Urdu schools.

Deputy Educational Inspectors.

The majority of them are graduates of a university, and others are old experienced teachers. The policy of the department in selecting those with higher education and training has been very praiseworthy.

Of these officers about twenty-five do most of the supervising and examining work. There being 2,985 elementary schools, and 178,571 pupils in the State, more than one hundred schools and seven thousand pupils fall to the lot of each. Each has to conduct the examinations of all these children and also has to supervise those schools. He is able to go to all the schools once a year for examinations, but apart from that he scarcely gets time to visit them once again for pure supervision.

The first grade deputy educational inspectors receive eighty rupees, rising to one hundred, and the second grade from sixty, rising to seventy-five rupees per month, an increase being given every two years. More attention should be paid to qualifications than to the salaries. Instead of finding a man to fit the clothes, the clothes need to be made to fit the man.

The Principal of the Kalabhavan: The principal of the Kalabhavan or any teacher authorized by him, visits and examines the industrial schools and the manual training classes.

Superintendent of Music Schools: The superintendent of Music Schools has to visit and examine the music

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schools of the state, as well as the special music classes opened in connection with other schools.

School Committees: There are school committees for local boys' schools. The members of such committees often visit the schools as a check upon teachers neglecting their duties, and as an encouragement for good work.

The following table shows the work done by each officer during the year 10–11.[1]

Name of officer.	No. schools examined.	No. children examined.	No. schools visited.	No. miles traveled.	No. letters disposed of
Vidyadhikari Educational Inspector			147	2,159	38,458
Kadi div'n. Educ. Insp'r	26	2,372	52	1,447	23,791
Baroda Div. Educ. Insp'r	32	2,196	65	850	23,248
Navsari Div. Educ. Insp'r	34	2,980	146	1,887	10,973
Amreli Div.	42	2,947	110	2,397	11,002
Lady Supt.	27	2,466	162	2,912	5,054
Second Lady Educ. Insp'r	23	1,573	67	1,197	678
Urdu Educ. Insp'r Baroda State and Urdu Deputy Educ'l Insp'r of Kadi and Amreli Divs.	75	3,519	43	2,176	13,331
Deputy Educ'l Insp'r Baroda sub-div.	108	4,312	29	414	9,956
Deputy Educ'l Insp'r Petlad sub-div.	77	5,603	110	659	9,277
Deputy Educ'l Insp'r Dabhoi sub-div.	134	4,272	74	909	8,519
Deputy Educ'l Insp'r Padra sub-div.	140	5,068	87	1,023	9,289
Deputy Educ'l Insp'r Savli sub-div.	80	4,419	99	1,063	8,548

1 Barod State, Report of Public Instruction, of 1910-11 pp. 53-54.

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Name of officer.	No. schools examined.	No. children examined.	No. schools visited.	No miles traveled.	No. letters disposed of.
Deputy Educ'l Insp'r Sankheda sub-div.	154	8,536	58	869	9,605
Extra Deputy Educ'l Insp'r Baroda.	98	6,108	4	506	956
Marathi Deputy Educ'l Insp'r Baroda div.	68	3,881	30	1,969	3,191
Urdu Deputy Educ'l Insp'r, Baroda and Navsari divs.	72	4,271	21	1,205	8,244
Educ'l Insp'r Antyaja schools Baroda State			57	952	1,335
Extra Deputy Educ'l Insp'r Kadi sub-div.	103	3,860	31	981	829
Deputy Educ'l Insp'r Patan sub-div.	89	3,827	76	767	9,690
Deputy Educ'l Insp'r Sidhpur sub-div.	89	4,820	43	615	9,677
Deputy Educ'l Insp'r Visnagar sub-div.	103	4,861	50	715	10,806
Deputy Educ'l Insp'r Mehsana sub-div.	97	4,558	96	1,444	11,840
Deputy Educ'l Insp'r Kadi sub-div.	102	4,406	88	897	6,584
Deputy Educ'l Insp'r Vijapur sub-div.	97	4,718	50	585	8,927
Name of officer.	No. schools examined.	No. children examined.	No. schools visited.	No. miles traveled.	No. letters disposed of.
Deputy Educ'l Insp'r Kalol sub-div.	99	4,396	66	885	6,346
Deputy Educ'l Insp'r Dehegam sub-div.	144	4,438	69	629	5,874
Deputy Educ'l Insp'r Navsari sub-div.	106	4,378	86	1,498	6,039
Deputy Educ'l Insp'r Vyara sib-div.	142	4,784	29	957	7,772
Deputy Educ'l Insp'r Kamrej sub-div.	165	4,727	61	1,150	5,991
Deputy Educ'l Insp'r					

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Amreli sub-div.	97	4,371	92	657	9,815
Deputy Educ'l Insp'r Kodinar sub-div.	140	3,995	131	1,756	13,186

The head master is the administrative head in a school. Although he is responsible for the work of his assistant teachers, he scarcely has any authority over them except that of good or bad recommendation. He is occasionally consulted in the appointment of an assistant teacher for his school; More attention needs to be paid to the reasonable likes and dislikes of a community toward a teacher.

Head Master.

The head master has full teaching work, and he has not any spare time for supervising the work of the other teachers or of the other local schools that are under him. If he performs his duties as a supervisor he misses his duties as a teacher of his class, and the class suffers. A great trouble arises when a teacher goes on a leave of absence. The head master has no right to make even temporary appointments. He is required to get a new man for the position on condition that he will have to work pending the sanction of his appointment by the higher authorities. In case the vacancy draws high salary, promotions are made all along the line and a new man is appointed for the lowest position. The promotions and appointments of different grades are in the power of different officers. The head master himself is not sure that his recommendations will be approved. Waste of time in intercommunications appears to be an ordinary evil. Suppose the Vidyadhikari wants to get the number of deaf, dumb, and blind children who would be willing to go to a state school; and he wants the information within fifteen days. Instead of writing to each school directly, which would give some time to the head master to make the necessary inquiries, he would write to the Educational Inspectors to get the information from their divisions. They would

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write for it to the Deputy Education Inspectors of their division, who would write to the school masters, scarcely leaving time enough for the school master to inquire thoroughly and obtain the correct information.

Suggestions for Reform.

The supervising staff should be non-biassed and should have broad and liberal ideas. Their work does not lie only in finding defects and writing them in the visitors' book of the school. They must show or teach the teachers how to remedy those defects. Because a man is a graduate of a university, it does not follow that he has the practical knowledge he needs for that sort of work, from the very time he starts as an inspector. It is necessary for him to possess higher academic standing, because that makes him fit to grasp new ideas, and to adapt himself to new surroundings sooner than another man who has not had the good fortune to acquire those qualifications. Therefore, it is desirable that these supervisors should either have some practical training in supervision or should have some experience as teachers. However, the experience that one would obtain as a teacher in a secondary school would be of little avail in supervising the elementary work, the experience being that regarding of adult students. The supervisors should understand child life and child psychology. They must also have an idea of how much to expect from these children and their teachers.

Owing to lack of adequate supervision, there can scarcely be any improvement in the school methods. The supervisor hardly finds time enough to see how all the subjects are taught. He gauges the teachers' abilities from results alone, which do not always give the true insight. Why cannot this work of examinations be entrusted to the teachers? Let the highest standard alone be examined by the inspector; so that he will have plenty of time for pure supervision. Constant supervision, together with practical suggestions and help

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from the supervisor, are absolutely necessary to bring about good results. The authorities might well pay special attention to this, and modify the present practice of addressing communications through several subordinate offices and thus save valuable time which could be devoted to real educational work.

CHAPTER IV

TEACHERS. (1)

The number of teachers provided for each school is just enough for teaching purposes, and the teachers do not have any spare time during school hours. The correspondence is carried on in such a formal manner that it requires much extra time. For removing all these difficulties it is worth while to assign extra teachers to two or three large schools in every Taluka. These teachers might do some clerical and teaching work and thus give a little spare time to the head master for supervision. They would also be of great use when some teacher goes on leave. Over and above this, the schools might be allowed to keep some candidate without pay, who should be given some remuneration whenever they work full time in the absence of a teacher.

Elementary teachers.

In elementary schools the salaries are not graded. The head teacher receives from ten to fifty rupees per month. Only about twelve positions of head masters have graded salaries, their minimum and maximum being fifty and seventy-five rupees per month. There are a few small schools, particularly girls' schools, where the single teacher receives eight rupees. The minimum pay of a teacher is seven rupees.

In the vernacular schools there are about five thousand teachers, of whom 2,278 get seven rupees a month, 1,265 get eight, 275 get nine, and 379 get ten i. e. 4,697 get ten rupees or less. About eighty per cent. of them

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get eight or seven. Besides this there is a law that none of the state employees can connect themselves with any business concern, it being their duty to devote their entire time to the service of the State.

There are more than two hundred and sixty secondary school teachers. Those that teach during the first four years of the secondary school (English school) are required to have passed the University entrance examination, and others are required to be graduates of a university. Secondary schools have six grades of teachers, promotion being biennial.

Secondary teachers.

Monthly salaries	1st grade	2nd gr.	3rd gr.	4th gr.	5th gr.	6th gr.
minimum	100	65	50	36	28	17
maximum	125	80	58	45	35	28

The minimum for the head masters of the Patan and Amreli high schools, and the head assistant teacher of the Baroda High School is one hundred and thirty rupees a month, and that for the head master of the Baroda High School is two hundred, their maximum being one hundred and fifty and three hundred respectively.

The department has supplied special teachers for physical education in forty-four large schools. Special teachers are also given for drawing, manual training, music, Sanskrit and English. Several girl's schools are provided with special teachers, tailors generally-who have obtained good knowledge in embroidery, for teaching needlework and embroidery, preference being given to women whenever available.

Special teachers:

Formerly in India, people held the teachers in great respect. All that is lost now, partly because they are

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paid for what they do, and partly because they are paid so little. They obtain less than many of those who do only menial work and who have no education,-who do not even know how to write their own names. Owing to the change in the condition of the country, due to its contact with foreign nations, and consequent revolution in the methods of conducting affairs, the first cause cannot be removed. But to remove the second cause is not so difficult. For the present those who are unfit for any other business take up the teaching profession, and many do it as a stepping stone to some other line. This is why efficiency is unknown in many teachers. Whatever amount of money be spent in the diffusion of education, one cannot expect good results unless a better class of teachers who would make teaching their lifelong profession can be attracted through handsome salaries. An account of the salaries of teachers in different countries would be very useful for comparison.

In the United States the lowest salaries vary from twenty-five to sixty dollars a month, according to different conditions. The teachers are allowed to do any work they like outside of school hours or in vacations, so long as it does not interfere with the school work.

In England, "The National Union of Teachers," a thoroughly representative organization of elementary school teachers, has been very active in the matter of standardization of teachers' salaries. The following is the scale of salaries adopted by the Union:

HEAD TEACHERS.

"The minimum salary of a certified head master should not be less than £150 ($750), and of a certified head mistress not less than £120 ($600).

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PROVINCIA CLASS TEACHERS.

Men—Minimum £90 ($450), maximum £180 ($900), by annual automatic increments of £5 ($25) to £100 ($500), and then by annual automatic increments of £10 ($50) to the maximum.

Women—Minimum £80 ($400), maximum £145 ($725) by annual automatic increments of £5 ($25) to £115 ($575), and then by annual automatic increments of £10 ($50) to the maximum.

Class Teachers in London and Neighborhood.

Men—Minimum £100 ($500), maximum £220 ($1100), by annual automatic increments of £5 ($25) to £110 ($550) and then by annual automatic increments of £10 ($50) to the maximum.

Women—Minimum £90 ($450), maximum £175 ($875), by annual automatic increments of £5 ($25) to £125 ($625) and then by annual automatic increments of £10 ($50) to the maximum.

Girls' and infants' mistresses of the same professional status, working in the same school, should be paid the same rate of salary.

Class mistresses working in mixed or boys' departments should receive the same rate of salary as the class masters in the same department.

In determining the initial salary to be paid to any teacher under this scale, regard shall be had to years of service rendered by such teacher under any local authority." [1]

These standards are not yet reached. The following table shows the salaries in active operation in a few places:

1 Sandiford, P. Training of Teachers in England and Wales. p. 110.

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"SALARIES IN POUNDS STERLING OF CERTIFIED ASSISTANT TEACHERS.

Years of service	London		Manchester		Crewe		Lancashire		Bedfordshire	
	Men	women	men	women	men	women	men	women	men	women
1	100	90	90	75	100	85	80	70	85	75
2	105	94	95	80	105	90	85	75	88	78
3	110	98	100	85	110	95	90	80	91	81
4	117.5	102	105	90	115	100	95	85	94	84
5	125	106	110	95	120	105	100	90	97	87
6	132.5	110	115	100	125	110	105	95	100	90
7	140	114	120	105	130	115	110	100	103	93
8	147.5	118	125	110	135	120	115	105	106	95
9	155	122	130		140		120	110	109	
10	162.5	126	135				125		112	
11	170	130	140				130		115	
12	177.5	134	145				135		118	
Maximum 35 yrs.	200	150	150	110	140	120	140	110	120	95
total	6620	4770	4860	3710	4720	4060	4510	3670	4190	3245

NOTE:—London County is a typical cosmopolitan city; Manchester and Crewe are industrial centres; Lancashire is a densely populated County; while Bedfordshire is an agricultural County. Deviations from the above are sometimes made for special qualifications."[1]

In Prussia "the new law fixes the minimum at 1400 M. ($350) per year. The scale rises to the maximum by nine increments. The first increment accrues after seven years' service and the others in periods of three years thereafter. The first two increments amount each to 200 M. ($50), the next two are of the value of 250 M. ($62.50) each, followed by five of 200 M. Thus the maximum after thirty years' service is 3300 M. ($825). A new feature of the law is that the sums paid as compensation for rent no longer depend on local circumstances, but are fixed once and for all according to the class of city in which the school is situated. The

1. Sandiford, P. Training of Teachers in England and Wales, p. 111

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compensation amounts to 800 M. ($200) in cities of the first class; 650 M. ($162.50) in cities of the second class; 540 M. ($135) in cities of the third class; 450 M. ($102.50) in cities of the fourth class; and 330 M. ($82.50) in cities of the fifth class. Further, for purposes of the pension the rent-indemnity is included in the calculation of the salary. In the salaries of teachers holding a professional appointment only, and of those not over four years in service the minimum mentioned above may be curtailed by one-fifth. "[1]

IN FRANCE THE FOLLOWING SALARIES ARE GIVEN:

		Men	Women
Stagiares		1100 francs	1100 francs
Titulaires.	5th class	1200	1200
	4th class	1500	1400
	3rd class	1800	1600
	2nd class	2000	1800
	1st class	2200	2000

"Teachers that have charge of a school with more than two classes receives two hundred francs extra, and this is increased to four hundred francs if the school has more than four classes."

The promotions depend upon the length of service in the last three classes. But the advancement in the first two is made on the basis of merit.

Moreover, the teacher is provided with two other items, the house or an equivalent lodging allowance, and an *indemnite de residence*, which varies from eight hundred to two thousand francs in Paris, and from one hundred to eight hundred francs in other places. He also raises his own vegetables in the school garden. The country teacher sometimes makes an additional income of one or two hundred francs a year by serving as secretary to the *maire*, and through this source he also increases the public interest in school affairs.[2]

1 Kandel, I. L. Training of Elementary School Teachers in Germany. p. 92.

2 Farrington, F. E. The Public Primary School System of France. p.p. 65—68.

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Thus the least pay in rupees per year in different countries is:

United States	England	Prussia	France	Baroda
937 to 2,250	1,125 to 1,500	1,094	688	84

His Highness the Maharaja Saheb has given his attention to this question, and has ordered the minimum to be raised to ten rupees. However, this rise is to be given to a teacher upon his success in the first year examination of the male training college. For enabling the teachers to draw this amount as soon as possible, the condition of compulsory attendance at the college has been postponed for three years.

The following tables giving the expenditures of teachers in different countries in *rupees* per year might form a good basis of comparison for the values of the salaries:

Expenditure of teachers.

GERMANY.

Expenditures on:	Young unmarried. teacher.	Childless Family Husband 20	Family with 1–2 children Husband 30	3—4 children Husband 40	Children grown up Husband 50
Food	405	630	720	900	900
Clothing and laundry	187½	225	375	450	525
Fire and lighting	45	75	75	75	75
Taxes and savings	75	112½	150	150	150
Supplies	45	75	75	75	75
Help	45	60	60	60	75
Health and Physical welfare	112½	120	120	150	150
Schooling				150	450
Educational	75	37½	37½	37½	37½
Extras	210	165	187½	202½	262½
Total	1200	1500	1800	2250	2700

These live rent free.

1. Kandel, I. L., The Training of Elementary School Teachers in Germany p. 96.

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ENGLAND. 1

Expenditures on:	Young unmarried teacher	Childless married bge 21	Family with 1–2 children Husband 30	3—4 Children Husband 40	Children grown up Husband 50
Food	390	427½	795	937½	937½
Clothing and laundry	195	177½	352½	412½	412½
Fire and lighting	87½	75	97½	97½	97½
Savings	90	90	112½	75	75
Household Supplies	...	75	112½	75	75
Help	...	...	87½	87½	87½
Health etc	75	112½	127½	75	75
Scheoling	...	...	...	...	...
Educational	112½	87½	87½	...	...
Extras	112½	90	112½	75	75
Lunches etc	142½	112½	150	150	150
Rent	195	232½	815	815	815
Total	1350	1425	2250	2250	2250

UNITED STATES. 2

Food	465	780	1080	1350	1350
Clothing and laundry	195	375	570	810	750
Heat and light	75	180	300	465	465
Taxes and Savings	165	195	345	675	1080
Supplies	75	105	195	330	330
Help	...	...	105	270	405
Health and Physical welfare	75	135	210	375	405
Schooling	...	...	30	75	540
Educational	90	135	195	210	135
Extras	135	210	300	405	405
Total	1275	2055	3330	4965	5865

Rent is not included.

1. Obtained through the courtesy of my friend Dr. I. L. Kandel.
2. Obtained through the courtesy of my friend Dr. R. W. Sies.

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BARODA.

Expenditures on:	Young unmarried teacher	Childless Family Husband 20	Family with 1–2 children Husband 30	3–4 Children Husband 40	Children grown up Husband 50
Food	60	100	140	180	200
Clothing and laundry	10	15	20	30	50
Fire and light etc	12	15	18	20	20
Savings	...	...	30	65	75
Suppli	...	5	5	10	10
Help	...	...	...	5	10
Health and physical wlfare	...	...	...	5	10
Schooling	...	...	5	15	60
Educational	...	...	5	5	5
Extras	...	...	5	5	10
Rent	6	6	12	20	30
Total	88	141	240	360	480

In the early life the teachers though not allowed, do some other work to make up their difficulties. Scarcely any teacher is unmarried and many of them though they are old and they have many children do not get even about two hundred rupees a year.

Pensions.

Pensions are given to teachers, pensionable age for the head masters and higher officers being 56, and that for the other teachers being 60 years. A teacher may be able to retire earlier on account of physical or mental disability He will receive one-fourth of the average salary of the last sixty months on finishing eighteen years' service For every year's additional service up to twenty-thre he will have in addition one seventy-second of the average monthly salary. The amount of this grade

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pension will not exceed one hundred and fifty rupees a month. After completing twenty--four years' service he will receive one--third of his average monthly salary, and then for every additional year up to twenty--nine, he will have one thirty--sixth of his average monthly salary in addition. This sum will not exceed two hundred rupees a month. Upon completing thirty years' service he will be entitled to receive one -half the average salary, which will not exceed three hundred and fifty rupees per month. In case of exceptionally good service this limit may be raised to four hundred and fifty rupees.

This law is applicable not only to the education department, but to all other civil servants of the state. The work of a teacher is far more difficult than is ordinarily thought of. He has to be thinking all the time, and has the great responsibility of guiding and improving the country's future. When it is time to retire, he is quite unable to do any kind of work.

The pension system in Prussia contains a noteworthy feature. Not only the teachers are pensioned, but the widows and orphans of deceased teachers are supported too. "A widow is entitled to forty per cent of the pension to which her husband was or would have been entitled at the time of his death. Such a sum, since 1907, must not be less than 300 M. ($75), nor more than 3500 M. ($875) per year. Children, if the mother is still alive, are entitled each to one--fifth of the sum paid to the mother, other--wise each to one--third of what their mother would have received. In no case, however, may the combined sum of the reciepts of the widow and orphans be equal to the amount of the pension to which the deceased was entitled. The claim to this provision ceases on the marriage of the widow

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or with the attainment of the eighteenth birthday by the orphans. Towards the widows' and orphans' fund the State contributes 420 M. ($105) for each widow, and 84 M. ($21) or 140 M. ($35) for each orphan, the sum depending on whether the mother is alive or not. The first payment of claims is made three months after the death of the teacher, but during this period the full amount of the deceased's pension is paid to his family (Gnadenquartal)."[1]

CHAPTER V.

TEACHERS. (2)

Training Elementry Teachers.

The idea of training teachers was first conceived by Mr. Bhogilalbhai, when he started State education. In 1872 he opened a normal class, where the teachers were trained, but there was no practice or observation school. However, the students either had practical experience in teaching or were actually teaching in some schools in the vicinity, as a means of supporting themselves. This class was closed in 1876. Schools for girls were started as early as 1877, and, to solve the problem of training women teachers the present Female Training College was started in 1882.

Within a few years the department began to extend so rapidly that a male training college was established in 1885. The teachers employed were of literary renown, scholarly abilities, and extensive reputation; and the institution became very popular. In 1891 it had 74 pupils, and the course was of three years. Some of the best teachers in the department are the products of this institution. But after it had had a notable career of eight years, the state educational authorities decided to close

1 Kandel, I. L. Training of Elementary School Teachers in Germany. P. 94.

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it. In June 1905 the present Male Training College commenced its work with a view to training teachers already in service. On the introduction of compulsory education in 1906–7, the necessity of training numerous teachers became apparent, and the curriculum was reorganized. In 1908 the period of study was raised from two years to three. The staff was increased, and arrangements were made to accommodate two hundred teachers. By 19. 10–11 there were 357 teachers in residence at the College thirteen of them belonging to the untouchable class. About 1300 men have been trained in this institution, and almost all of them are in the state service.

Satisfactory completion of the elementary school course is required for entrance to the training college. The teachers that are admitted to the college are given half their salary, which amout should not be less than seven rupees.

The college has a three years' course, the subjects taught being as follows:—

	1st year	2nd year	3rd year
Mathematics	Arithmetic		
	Algebra	Algebra	Algebra
	Geometry	Geometry	Geometry
Science	Physics	Physics	Physics
	Chemistry	Chemistry	Chemistry
	Sanitation	Astronomy	
		Agriculture	
Languages	Gujrati literature	Gujrati literature	Gujrati literature
	Composition	Composition	Composition
	Grammar	Grammar	
	Sanskrit	Sanskrit	Sanskrit
		Hindi	Hindi
Pedagogy	Child nature		
	Principles of Education	Principles of Education	Principles of Education
	Educational Laws of the State	Educational Laws of the State	History of Education

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	Practice ing Teach-	Practice ing Teach-	Practice ing Teach-
Drawing, Music, etc.	Drawing	Drawing and Color work	Drawing and Color work with use of black-board
	Music Gymnastics	Music Gymnastics	Music Gymnastics

In music the knowledge of the used in the Reading Series is given. In Gymnastics, in the first year is taught drill and practice of dumb-bells; in the second year, drill, dumb-bells, and use of stick; and in the third year drill, use of stick and Indian clubs.

Special teachers are provided for teaching music and Hindi. There is a practice school attached to the training college, were each teacher practices teaching for about ten days every year.

There is no institution to train secondary teachers in Baroda. In its absence, during the last few years, the state has been sending two teachers or more every year to the Madras and Bombay secondary training colleges, there being only one such college in each presidency.

Training Secondary Teachers.

The curriculum of the Bombay secondary training college can be inferred from the following regulation supplied by its principal. The course of study lasts for one university year, *i.e.*, from January to the end of September.

Curriculum.

At the close of the course of study, an examination is held by a board constituted by the Department in accordance with the following regulations:

(i) The examining board will be appointed by the Director of Public Instruction.

(ii) The Board will consider in the case of each candi

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date (a) his performance at written examination, (b) the notes kept by him throughout the year, (c) the reports of his practical work furnished by the principal and the vice-principal of the college.

(iii) The written part of the examination will consists of three papers, and will embrace the following subjects: (i) educational organization, psychology the history of education one paper; (ii) class management and method with reference to (a) general principles, (b) English, (c) history and geography, and other literary subjects, (d) mathematics, (e) science two papers. Candidates must satisfy the examiners in: (i), (ii), (a), (b) and one or more of (c), (d) and (e).

(iv) The notes examined will include a general compendium of the practical rules of the teaching, notes of lessons, and essays written in the course of the year.

(v) The reports will notice precisely the candidate's enunciation and command of English, his skill in asking questions, his power of exposition and discipline, and his use of blackboard.

(vi) In all written work good hand-writing will be expected.

(vii) On the result of the whole examination, diplomas will be issued to the successful candidates, who will be graded in two classes, 1st and 2nd.

Diplomas are issued to those students whose work, theoretical and practical appears to deserve them; and these diplomas are recognized by Government as specially qualifying the holders for employment as teachers in the educational department.

The outlines of the curriculum are pretty well organized. But the course is only of one year, and one wonders

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what can be accomplished in a single year. It should be extended to at least two or three years.

Teachers' Associations,

Teachers' associations called "The Dnyan Vardhak Sabhas" (associations for increasing knowledge), are established in connection with 234 principal schools. The meetings are held once a week. Here the teachers come in contact with one another, mix socially, and discuss educational topics. Here each one has the advantage of another's knowledge and ability, with a happy interchange of ideas. Some of these associations do very efficient work. At present, the time of these associations is entirely taken up by the discussion of the lessons in the new Reading Series, which are rather difficult.

A voluntary association of teachers called "Shikshaka' Mandal has been started within the past few years at Baroda Its various meetings which are held during the year are addressed by some prominent men. Once a year it holds its meetings for two or three days, and gathers together some of the best men in the educational field. It takes up purely educational as well as ahdministrative problems. It promises to be a very powerful factor in the advance ment of education and in the support of teachers' rights, like the National Education Association of the United States, and the National Union of Teachers in England.

National Education Association of the United States, and the National Union of Teachers in England.

Measures for Greater Efficiency.

Pedagogy needs to be given more time and importance. Educational Psychology, Child Study, Principles of Education, History of Education, and Administration ought to find a place in the curriculum over and above the special methods in teaching different subjects For a training college course, besides pedagogy, a subject

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would be welcomed if it is to be taught to the children in the schools, or if it is going to be of practical use to the teacher in his career.

The training colleges have to lead and not to follow. They have to be patient and ready to sacrifice their time for experiments which may appear to be of future use. Their field is so wide that they can take into their fold any subject that has the least connection with the school and the child. They must be ready to maintain their progressive character and try to reach the aims for which they stand, viz. character, scholarship, culture, teaching ability and professional spirit. This should all come through the expert teachers in the training college They should not only be teaching experts but wise critics; and their criticism must be both 'constructive and cumulative'. They should never break down the courage and confidence of their charges without having something to put in its place anything that may inspire hope and give rise to proper ambitions.

Any kind of practical work has three stages: (1) reflection or observation, (2) putting the thoughts or the design on paper, and (3) putting these thoughts or design into actual practice. Teaching has the same three stages: (1) observing some model lesson, (2) writing a similar lesson, and (3) teaching that lesson. This needs two schools, an observational school with the best teachers, and a practice school for actual teaching work. To this can profitably be added a third school-an experimental school, where new ideas in education can be introduced and the results watched before risking their introduction into the regular schools.

In Baroda the sole requirement for becoming a teacher is the successful completion of elementary education. Most of the boys complete this before the age of

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fourteen, but in as much as the state does not employ the services of any man before he is eighteen, after finishing the elementary education, one either engages in some sort of business, or wastes his time. While at eighteen he is ready to be a teacher, yet owing to peculiar standards of examination, which will be discussed in a saparate chapter, he may not be a master of any of the subjects. Moreover, being away from the school atmosphere for more than two years, he may forget some things too. To remove these defects, it would be very desirable to keep the candidates in touch with the practical school work throughout this period. The Deputy Educational Inspector lives at one place for about three months or more, during the rainy season. At this time the number of available candidates might be formed into a class, and some instruction in child nature and methods of teaching could be imparted with profit. After a few years' training and experience of this kind, these candidates could be sent to the Training College, where they might attain a greater proficiency with very little additional expense to the State.

One great defect in training teachers is the absence of specialization. Among the objections for special teaching are: (1) there is likelihood of lack of discipline; (2) there would be no variety in subjects for the teacher, and (3) there would be less of contact between the pupil and the teacher.

The first objection can be removed by placing the responsibility upon the individual, and the class as whole. As for the second, the teacher would, on the other hand, be relieved of a number of subjects, and would have time to master the subject of his liking. It would be advisable to make the teachers specialize in three subjects, one major and two minor, so that if necessary a variety could be arranged. The third objection can be removed

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by several social organizations where pupils and teachers come into frequent contact.

However, the greatest objection yet remains. There being many teachers for one class, the pupils may be assigned much home work, and thus may be overworked. Some teachers think that the subject they teach is the most important one. These teachers having a better personality and knack of pleasing students, make them give most of their time to a particular subject at the expense of others. However, this objection of overwork can be remedied by keeping a note book in the class room to register the home work assigned by each teacher. This book should be examined every day by the head master, to see that the work is properly distributed.

The advantage of the special teacher is that he works in the field in which he is interested, and gets time to be proficient in that subject, and thus the pupils get what is best. Instead of wasting their time in mastering each and every subject, which is manifestly impossible of attainment, if specialization is allowed, they can acquire their special subjects in a comparatively short time. The time thus saved can well be devoted to the methodology of those subjects. This would unquestionably be of more practical value in their future work; for it would give them the desired what, how, and why of teaching.

Special teachers can be trained in kindergarten, denture study, industrial arts, music, drawing, and physical education, in addition to the subjects already given. Teachers as a rule should be expected to know the school and home sanitation, how to test eyesight and hearing of children, and know, if possible, the indications of important chronic defects. They must at least have the ability to detect the signs of acute diseases.

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The teachers' associations should take up more and more the discussion of method and content, and the relation of the school, the child, and the parents. In connection with these associations can also be taken up the study of pedagogy. Certain good books might be selected, read and discussed. The secondary teachers also might establish similar associations, form reading circles, and call meetings for discussions and practical work. The summer vacations, if need be, might be utilized as a short summer session for pedagogical studies. In India pedagogy is not yet recognized as a desirable subject for the university curriculum. A new departure might be made, and even though not required by the university, some extra courses might be offered at the Baroda College for those who intend to work in the educational department after their graduation.

The money and energy spent in training teachers never goes to waste. It becomes more profitable to the State in the long run. The State is made up of individuals, and the individuals of future generations are made by the present teachers. Improvement in teaching service is effected (1) by sympathetic instruction of the supervisors, and (2) by personal study through their individual efforts. This instruction and study can bring together the necessary information, methods, and principles. Success in any profession depends entirely upon the innate ability, and necessary equipment, coupled with a sincere desire for betterment. The public can scarcely discriminate between a well taught child and a poorly taught one. The desire for improvement in work does not come from the public, but from the progressive teachers. The supervisors and other administrative officers can stimulate this progress in the teacher by example, by suggestion, and by promotion or increase in salary.

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CHAPTER VI.

SUBJECTS OF INSTRUCTION.

Kindergarten.

There are no separate kindergarten classes in the Baroda schools, but the 'below standard' class resembles a kindergarten class. Work of this type is given about fifteen hours out of the thirty-three per week, the remaining eighteen hours being used for formal reading, writing, and multiplication tables. The kindergarten work is carried on to some extent up to the third standard, its contents being Froebel's gifts and occupations, games, observation lessons, stories, and songs. Almost all of it is of a very formal nature.

Elementary schools.

Elementary schools have seven-year course, the first year being called 'below standard' and the others first standard, second standard and so on. Success in the annual examination of the sixth standard is the least requirement for public service. Hence very few pupils ever go beyond this point. Only those passing the seventh standard are given preference in the educational department.

In the old style schools, reading, writing, and arithmetic were taught. There were no text-books. More stress was laid on writing and arithmetic. One with good handwriting always received an excellent position. More time was also devoted to mental arithmetic. Those who went to the schools were future candidates for a teacher's, priest's or a merchant's profession. After the British government published the Reading Series and other text-books, the curriculum was Westernized. Slowly and slowly new subjects began to be introduced. Between 1885 and 1895 the curriculum was very heavy.

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However, the burden was not felt, as the pupils that entered the schools were older than the average pupil now. After 1895 some subjects were eliminated and the burden lessened. The present weekly program of the vernacular schools is as follows:—

ELEMENTARY SCHOOLS—PERIODS PER WEEK.

	Below Standard.	First Stand.	Second Stand.	Third Stand.	Fourth Stand.	Fifth Stand.	Sixth Stand.
Arithmetic ...	6	9	7	7	7	7	6
Reading	6	11	7	7	7	8	9
Writing			4	5	4	4	2
Geography and History			3	3	4	4	6
Nature Lessons ...						2	2
Drawing						1	1
Gymnastics and Drill						3	3
General knowledge	4	6	5	4	4		
Total ...	16	26	26	26	26	29	29

The school work occupies thirty-three hours per week. Every period is either of thirty minutes or sixty minutes duration, the distribution of time being left to the individual head master, provided only he arranges for the stated number of lesson periods per week. There is no intermission allowed between periods. The pupils of one class always occupy the same room, and they are taught by the same teacher all the time. The village schools are held from 7 A. M. to 10 A. M. and from 2 P. M. to 5 P. M. every day, and the town schools from 11 A. M. to 5-30 P. M.,

School time.

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with half an hour for recess at 2 P. M. This arrangement of time is due to the fact that the people of India take only two meals a day, the first at about 10 A. M. and the other in the evening. The schools are open all the year around, there being no long vacations. Sundays are observed as holidays, and Saturdays and Wednesdays as half-holidays. Besides these, thirty religious holidays, and some special holidays like the birthdays of the ruling king, princes, and the ruling emperor, etc. are observed. This allows about 245 full working days in a year. The official year begins on August 1st, but it does not affect the pupils, as the new classes are organized after the examinations, which are never held in all the schools at the same time.

The subjoined detailed programs in various subjects will show the extent to which the different subjects are taught:

Mathematics is the first subject presented to the child. At home or at school, he learns the numbers first and the alphabet afterwards.

MATHEMATICS.

The numbers from 1 to 100 are taught first, then the multiplication tables are begun. The multiplication tables of India differ from those of the other countries. It would be interesting to give a few here.

1×1=1	1×2=2	.....	1×10=10
2×1=2	2×2=4	.....	2×10=20
.....	.....	.....	.....
10×1=10	10+2=20	.....	10×10=100
11×1=11	12+1=12	.....	40×1=40
11×2=22	12×2=24	.....	40×2=80
.....	.....	.....	.....
11×10=110	12×10=120	.....	40×10=400

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$1\times\frac{1}{2}=\frac{1}{2}$	$1\times\frac{1}{4}=\frac{1}{4}$	$1\times\frac{3}{4}=\frac{3}{4}$
$2\times\frac{1}{2}=1$	$2\times\frac{1}{4}=\frac{1}{2}$	$2\times\frac{3}{4}=1\frac{1}{2}$
.....	.....	.....
$100\times\frac{1}{2}=50$	$100\times\frac{1}{4}=25$	$100\times\frac{3}{4}=75$
$200\times\frac{1}{2}=100$	$200\times\frac{1}{4}=50$	$200\times\frac{3}{4}=150$
.....	.....	.....
$1000\times\frac{1}{2}=500$	$1000\times\frac{1}{4}=250$	$1000\times\frac{3}{4}=750$

$1\times1\frac{1}{2}=1\frac{1}{2}$	$1\times1\frac{1}{3}=1\frac{1}{3}$	$1\times2\frac{1}{2}=2\frac{1}{2}$	$1\times3\frac{1}{2}=3\frac{1}{2}$	$11\times11=12$
$2\times1\frac{1}{2}=2\frac{1}{2}$	$2\times1\frac{1}{3}=3$	$2\times2\frac{1}{2}=5$	$2\times3\frac{1}{2}=7$	$12\times12=141$
.....	.....	.....	.....	.....
$100\times1\frac{1}{2}=125$	$100\times1\frac{1}{3}=150$	$100\times2\frac{1}{2}=250$	$100\times3\frac{1}{2}=350$	$100\times100=10000$
$200\times1\frac{1}{2}=250$	$200\times1\frac{1}{3}=300$	$200\times2\frac{1}{2}=500$	$200\times3\frac{1}{2}=700$	
.....	.....	.....	.....	
$1000\times1\frac{1}{2}=1250$	$1000\times1\frac{1}{3}=1500$	$1000\times2\frac{1}{2}=2500$	$1000\times3\frac{1}{2}=3500$	

Below standard: Multiplication tables up to 20+10=200. Oral addition and subtraction.

First standard: Multiplication tables up to $1000\times\frac{3}{4}=750$. Oral addition, subtraction, and multiplication in which tables up to "40×10=400" can be used. Knowledge of currency tables.

Second standard: (a) All Multiplication tables. Arithmetic, reading and writing figures up to Karod, i. e. 10,00,000. Addition and subtraction with figures of five digits. Multiplication having multipliers of three digits; and division having divisors not more than 40.

(b) Mental arithmetic: problems of everyday use which can be solved orally with the use of the multiplication tables.

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Third standard: (a) Arithmetic, multiplication and division involving numbers of many digits. Knowledge and use of all the tables of measures (except the square and cubic measures) in addition, subtraction, multiplication, and division.

(b) Mental arithmetic: about weights, viz. sher (a pound), Mana (40 pounds), and Kalshi (640 pounds).

Fourth standard: (a) Arithmetic, square and cubic measurements. Addition, subtraction, multiplication, and division of Anapana.[1]
Fractions, Rule of three.

(b) Mental arithmetic: Problem involving gold and silver weights, land areas, length measures, and salaries.

Fifth standard: (a) Arithmetic: Decimals, compound rules of three, and simple and compound interest.

(b) Mental arithmetic: Problems of interest, of hundreds and thousands (in the case of bundles of hay,

1 Anapana is the name used for a particular way of writing fractions. Using Anapana, three and a quarter would be written as 31, three and a half as 311, and three and three-quarters as 3111. This form causes no confusion in the Hindu characters, for the figure 'one' is more like a carelessly made Arabic 'two.' In Indian currency, twelve 'pies' make an 'anna', and sixteen 'annas' make a rupee. Three rupees, seven annas and six pies would be written as 31—11. It looks a little complicated to a foreigner, but it is very simple and saves time.

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tiles, bricks etc. The price quoted is per hundred or per thousand.)

(c) Accounting: keeping simple accounts.

Sixth standard: (a) Arithmetic: complete except the progressions.

(b) Mental arithmetic: all kinds of problems.

(c) Accounting: Use of Hindu account books and the commercial system of charging interest.

(d) Geometry: Definitions, postulates, axioms, and first sixteen propositions from the first book of Euclid's geometry.

Much time is wasted in mechanical drill on numbers. Problems given in arithmetic have very little relation to the everyday life. Too much stress is laid on problems having numbers of many digits, and on long and complicated fractions. Mental arithmetic is very highly developed in India. Very quickly and with very simple methods, one is enabled to work out problems of everyday dealings. In spite of all this the result of school teaching in this subject has not been very satisfactory. It may be due to the fact that the pupils are required to commit to memory the rule and apply it without knowing how the rule is derived.

REDINGA.

Below standard: Balpothi[1] part I.

First standard: Balpothi part II, and lessons 31 to 45 from Reading Series No. 1.

1. Balpothi' is children's reading book.

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Second standard: (a) Prose: Reading, definitions explanations, and ability to give the substance of the lessons from Reading Series No. 2.

(b) Poetry: Recitations and explanation of all the poems from the Reading Series No. 2.

Third standard: (a) Prose: Reading, definitions, explanations, and ability to give the substance of lessons from Reading Series No. 3.

(b) Poetry: Recitation and explanation of all the poems from the Reading Series No. 3.

(c) Grammar: Recognizing the declinable parts of speech, and applying gender, number, and case to nouns.

Fourth standard: (a) Prose: Reading, definitions, explanations, and ability to give the substance of lessons from the Reading Series No. 4.

(b) Poetry: Recitation and explanation of all the poems from the Reading Series No. 4.

(c) Grammar: Simple parsing and the knowledge of the root, subject, object, and tense of any verb (from the short grammar by Hargovinddas and Lalshanker).

(d) Letter reading [1]. Reading letters written in ordinary hand.

1 This subject is introduced to give practice in reading letters as it is hard to read matter written without special care.

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Fifth standard: (a) Prose. Reading, definitions, explanations, and ability to give the substance of lessons from the Reading Series No. 5.

(b) Poetry. Recitation and explanation of all the poems from the Reading Series No. 5.

(c) Grammar. Hard parsing, and articles 1 to 190 from grammar by Hargovinddas.

(d) Letter reading. Reading letters written by various persons.

Sixth standard: (a) Prose: Reading, etymology, definitions, explanation, and ability to give the substance of lessons from the Reading Series No. 6.

(b) Poetry: Recitations of lessons 4, 9, 34, 43, and 50 and explanation of all the poems from the Reading Series No. 6.

(c) Grammar: Articles 1 to 291 from grammar by Hargovinddas.

(d) Prosody: Measures of all the tunes used in the Reading Series.

The British Government has published a reading series in eight volumes, which are used as text-books during the first seven years. Some of the lessons in it are so hard that even a good teacher cannot understand them thoroughly. It also contains a number of science lessons. It is something like a small encyclopedia and is the only book used for language work. Through this subject one learns only definitions, explanations, and little grammar. After a long study of grammar, the

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pupil knows only the definitions, and a few examples of each kind, but he can scarcely apply his knowledge in practical work. A text book of grammar is given to the pupils from the very beginning, which leads them to memorize without understanding.

WRITING.

Below standard: Ability to write the portions read.

First standard: (a) method of writing vowels that come after the consonants in Gujarati and Balbodh (Sanskrit.).

(b) Ability to write the words used in the reading lessons.

Second standard: (a) Dictation of small sentences from the reading book in Gujarati or Balbodh.

(b) Penmanship: Copy-writing in both the scripts.

Third standard: (a) Dictation: Five lines from the reading book in any script.

(b) Penmanship: Copy writing in both the scripts.

Fourth standard: (a) Dictation: five lines with punctuation, from the reading book in any script.

(b) Penmanship: Copy writing in both the scripts.

(c) Letter-writing: Writing notes and letters.

Fifth standard: (a) Dictation: Five lines with punctuation, from the reading book in any script.

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(b) Penmanship: Copy writing in both the scripts.

(c) Letter writing: Mortgage and real estate deeds, notes on interest, drafts, etc.

(d) Composition: short descriptive compositions.

(e) Moral lessons: knowledge of the lessons on morality and religion given in the reading book.

Sixth standard: (a) Dictation: Five lines with punc tuation, from the reading book in any script.

(b) Penmanship: Copy writing in both the scripts.

(c) Letter writing: Ability to write the substance of whatever the examiner reads or says; reports and applications.

(d) Composition: on some simple given subjects.

(e) Moral lessons: Knowledge of the lessons on morality and religion given in the reading book.

Seventh standard: (a) Dictation: from any book in any script. The pupils should be able to put the punctuation where necessary.

(b) Composition: Compositions of a higher nature.

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HISTORY AND GEOGRAPHY.

Second standard: (a) Geography: Knowledge of directions, definitions, principal towns famous places, large rivers, mountains, ports, and other important facts about the Baroda State.

Third standard: (a) Geography: General geography of the Bombay Presidency, detailed geography of Gujarat, interrelation of the earth, continent, country, presidency, and district; and drawing the map of the school building, and of Gujarat, marking the divisions of the Baroda State with main rivers and towns.

Fourth standard: (a) History: History and constitution of the Baroda State.

(b) Geography: General geography of India, and drawing the map of India, marking the principal cities, rivers, and mountains.

Fifth standard: (a) History: From easy history of India by Vithaldas, Mahomedan invasions of India, chapters 1 to 4, Pathan kingdom of Delhi chapters 1 to 6, and Mogul Kingdom, chapters 1 to 9.

(b) Geography: Asia and Europe. Map-drawing of India with principal cities, rivers, mountains, ports, with latitudes and longitudes.

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Sixth standard: (a) History: From easy history by Vithaldas, first eleven chapters (ancient history of India) and complete history from the Maratha period.
(b) Geography: Complete geography of the world. Map-drawing of India.
(c) Physiography: Definitions, shape of the earth, its motion, day and night, seasons, eclipses, tide and ebb, dew, rain, hail and snow.

Too much memory work is done in this subject. Remembering the dates, wars, acts, treaties, and names is all that is paid attention to in history. No home geography is offered, and the subject of geography is very poorly taught. When the pupils finish their elementary education, they scarcely know much in history and geography which would be of practical use.

Science.

Instruction in science is given in the seventh standard. In addition to the principles of sanitation which are taught through a small sanitary primer, the elements of chemistry, mechanics, or geology are also offered. Children learn a few lessons on science and nature study that are taught in connection with the reading series. But this is done as a part of language work, where full scope is not given to practical work.

Secondary Schools.

In secondary schools the school work is 28 hours a week. The schools are held from 11 A. M. to 4-30 or 5 P. M., with half an hour or an hour for recess at 2 P. M. Almost all the periods are of sixty minutes, a few being of thirty minutes only. No rest is allowed between periods[1] Sundays

1. In Shri Sayaji High School (grant-in-aid) at Baroda, fifty minute periods are kept and after two such periods a rest of twenty minutes is given.

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are observed as holidays and Saturdays as half-holidays, the school on the latter day being held form 7 A. M. to 10 A. M. Several religious and special holidays are observed. Besides a summer vacation of from four to six weeks is given during the months of May and June.

The following is the weekly program of the secondary schools in the Baroda State:

SECONDARY SCHOOLS--HOURS PER WEEK.

Subject	1st yr.	2nd yr.	3rd yr.	4th yr.	5th yr.	6th yr.	7th yr.
Arithmetic	5	4	4				
Vernacular	9	8	7	3	3	3	3
Geography	2						
English	11	12	12	12	11	11	9
Drawing	1	1	1	1	1	1	
Hist. & Geog.			4	3	4	4	4
Arithmetic Algebra & Geometry				5	5	5	5
Classics				4	4	4	5
Natural Science, i. e. Chemistry & Astronomy							2
	28	28	28	28	28	28	28

Mathematics.

Mathematics here includes arithmetic, algebra, and geometry. If one finishes his elementary course, and then takes up the high school work, there is a complete repetition in arithmetic.

Vernacular.

Very little attention is paid to the study of the Vernacular in the high school, there being only three hours a week in each of the last four years. At the end of the High school, the average pupil does not know how to write even an

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ordinary composition in good language, and is scarcely acquainted with many well known authors.

English.

The English language occupies most of the time in the curriculum. Moreover, during the last four years all subjects except the vernacular are taught through English. In spite of that and in spite of a study of seven years, the pupils are neither able to speak a few connected sentences nor to write a good theme of about two hundred words. Much time is spent upon definitions, explanations, translations, and grammar. Derivations, definitions, and explanations of phrases are committed to memory. The system of text books affords a good opportunity for cramming.

History and Geography.

The history of India in the vernacular is finished in the first three standards, and the same in English in the next two standards. A larger history of India in English is completed during the sixth and the seventh years, and the history of England in the fifth, sixth, and the seventh. In history-teaching considerable attention is given to dates, battles, treaties, and acts. Geography is taught in details all through. The pupils are required to know by heart the names of all the counties of England, Scotland, Ireland, and Wales, with their chief towns and the cities, rivers, mountains, lakes, gulfs, bays, straits, islands, etc. of all the countries.

Other Languages.

Sanskrit, Persian or French is required of every student from the fourth standard on. Sanskrit is taught in all the schools, and facilities are provided for Persian and French in a few.

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Teaching all subjects in English was emphasized by Lord Macaulay only with the motive of imparting knowledge of science. One gets no science in the elementary school and only two hours a week in the last year of the high school. Theoretical knowledge is imparted in chemistry and astronomy through elementary text books, and once in a while the teacher demonstrates some experiments which the pupils see from a distance. The pupils are not allowed to do their own experimenting, nor to touch the apparatus.

Science.

CHAPTER VII
ENGLISH EDUCATION.

Owing to the relations with the British government, and through it with the outside world, it was thought advisable to introduce a study of the English language in the State. The Baroda High School was one of the first five schools established as a start in state education on March 22, 1871. Another school was opened at Petlad on January 6, 1873. These were further supplemented by two, at Sojitra and Dabhoi in 1878, and three more, at Kadi, Patan, and Amreli in 1879. The Baroda College was founded in 1882 and was affiliated with the Bombay University for the Previous (Freshman year) examination. In 1890, it was recognized for full courses in Arts, Science, and Civil Engineering for the diploma in agriculture; and for the first examination in law in 1892.

Extent.

At present there are forty-one English institutions: one college, three high schools, twenty-five Anglo-vernacular schools and twelve grant-in-aid schools, teaching 6,906 pupils, 329 of them being in the college. The number of Anglo-vernacular schools showed an increase to fen, and the grant-in-aid schools of three within year

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1909–10. Since the introduction of compulsory education, there has been a remarkable increase in the spread of English education. The following table gives the numbers of pupils in various institutions during the last seven years:[1]

	1905	1906	1907	1908	1909	1910	1911
Baroda College	225	206	235	212	225	316	329
High schools	1,126	1,246	1,115	1,276	1,445	1,552	1,629
Anglo-vernacular	1,486	1,599	1,660	1,815	2,149	3,001	3,130
Grant-in-aid	483	621	981	1,480	1,294	1,527	1,818
Total	3,320	3,672	3,995	4,783	5,113	6,376	6,906

There are 261 professors and teachers in purely state institutions, and 101 teachers in grant-in-aid schools.

Nominal fees are charged for the English education, the rates being half of those charged in the city of Baroda. In the City of Baroda they are three-quarters of a rupee for the first three standards, one rupee for the fourth, two rupees for the fifth and the sixth, and two and a quarter for the seventh. The College charges a fee of thirty rupees each term, there being two terms in a year. The fees are about half of what they are in the schools and colleges in the British provinces.

Fees.

The annual cost of educating each pupil was about 207 rupees in the College, about 23 in the English High schools, about 18 in the other English Schools, and about 29 in the grant-in-aid schools. In the latter thirteen rupees per pupil were contributed by the State in 1910–11.

A new departure of teaching English in the elementary schools shows the present tendencies which may in future revolutionize the educational system of the State. English classes have been opened by the State

English classes in Vernacular schools.

1 Baroda State, Reports on Public Instruction, 1907-8 onwards.

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in girls' schools at Visnagar, Patan and Petlad, and in the school at Damnagar. Moreover, people, if they want English taught to their children, collect a certain sum of money from among themselves and appeal to the State, which makes up the deficiency, and opens a class. Nine such classes have been opened under the grant-in-aid system.

Any school that has a full seven year course is called a high school; the others are termed Anglo-Vernacular schools. Grant-in-aid schools are started by private enterprise, but they receive some substantial help from the State and are under the supervision of the state authorities. These secondary schools do not form a sequence to the elementary school, but overlap them to some extent. Any student that has successfully gone through the fourth standard course in the vernacular schools is entitled to be admitted to the secondary school. One is entitled to attend the College when he has finished the secondary school course and has passed the matriculation examination, that is, the entrance examination of the University.

English schools, Relation to Vernacular Schools.

English schools are under the control of the Minister of Education. Formerly their annual examinations were held by the Director of Anglo-Vernacular Instruction, with the help of the Educational Inspectors, then by the professors of the Baroda College and the higher assistants or the headmaster of the Baroda High School, and for some years past by the officers of the Vernacular branch. Through the circular of the Minister of Education, dated February 11, 1905, His Highness, the Maharaja Saheb, empowered the educational inspectors to visit and inspect the English schools in their divisions. However, the annual examinations of the

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high schools have been entrusted to the head masters of the respective schools. Other schools are examined by the educational inspectors or the deputy educational inspectors, according to the orders of the Minister of Education. In some elementary schools English classes have been opened, but it is ordered that the officers of the elementary schools exercise no control whatsoever over the English teachers, they being under the jurisdiction of the English department. This sort of attitude is liable to ruin the administration of a school. What is the use of having the same administrative head for both the departments, when such a double government has to be continued? For removing this overlapping and for maintaining the administrative efficiency of both the departments, it is advisable to change the scheme altogether. The people do want a little knowledge of English, and most of them cannot afford to send their children several miles away from home for that education, owing to the cost of maintaining their children outside home. During the first three years in the English school, besides English, the subjects taught are the same as in the last two years of the elementary schools. Why not eliminate some useless subjects and introduce English in the last two years of the Vernacular school, and make it a rule to appoint a teacher knowing English, wherever the last two standards are taught? The remaining four years of the High school can be maintained as high school standards, imparting purely secondary education.

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CHAPTER VIII

RETARDATION, PROMOTION, AND EXAMINATIONS.

Retardation

In India no one has as yet looked to the problem of retardation. There is too much of it in the elementary as well as in the secondary schools. It is very prevalent even in the Colleges. In the university examination, hardly fifty to sixty per cent. are successful; the rest are required to toil again. In the whole of India about 24,000 appear for the matriculation examination of the universities, out of whom about 11,000 are successful. Of these 11,000, only 1900 get their B. A. degrees. Comparing these results with those of Oxford, (England,) it appears that there the number of failures to matriculate is negligible; and out of 900 that matriculate 650 get the degree. To give some indication of the retardation in the elementary schools in our state, the table showing pupils in different standards in two succeeding years will be useful:

	Below Stand.	First Staud.	Second Stand.	Third Stand.	Fourth Stand.	Fifth Stand.	Sixth. Stand.
1909-10	75,645	33,699	22,731	15.453	7,893	4,203	2,763
1910-11	84,214	37,161	23,801	14,473	9,866	4,114	2,598

Even eliminating the "below standard" where the children may enter at any time, we can see that there has been considerable retardation or elimination somewhere. In 1909-10 there were 33,699 in the first standard of whom fewer than 23,801 were promoted to the second standard in 1910–11, the number of every standard including those who were promoted, and those that were left behind. One can find some pupils in the elementary as well as the secondary schools dragging along in the same classes for three and four years.

The results of this condition are: (1) Great difference in age among the pupils of the same class, (2) If

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the majority be younger pupils, the older ones are dejected, and they dislike to attend the school and keep up the studies, (3) If the majority be older ones, the younger are many times troubled by the older lot, (4) By keeping all of them in the same room, either the better do not receive proper attention from the teacher, or the backward ones are neglected altogether.

All of these difficulties can be avoided by putting the retarded pupils in separate classes, not exceeding fifteen in a class, where special individual attention can be paid to them.

Special classes can also be provided for pupils who show great ability in their work, so that they may not lose time by being forced to remain with the whole class.

Number of Pupils to a Teacher.

Generally the number of pupils assigned to a teacher is forty. However, in lower standards, where it ought to be smaller, it exceeds the limit, and the work suffers. This is the time, when, the child nature being plastic, it can be moulded into any form, and the teachers, if able to give individual attention, can procure definite results.

Promotion.

At the end of the year a reclassification of the pupils is made according to the results of the examinations. This is left to the discretion of the headmaster, with few rules to guide his work. To obtain promotion it is not necessary to pass in all the subjects. The passing mark is only thirty-three per cent. In elementary schools one must obtain at least twenty-five per cent. in grammar and arithmetic. Here a value is set on different subjects, grammar and arithmetic being considered the most valuable. In spite of this one might find pupils in the sixth standard

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who could scarcely distinguish a verb from an indeclinable. Through drill one is able to give the rules and definitions correctly, and this gives him the necessary percentage. The secondary as well as the elementary pupils, if they answer very well about half the number of the questions or show some knowledge in every question, are able to make up the required percentage of marks.

No efforts are made to make up the deficiencies of those who are promoted to a higher class. However, such cases are very few, and so no special classes are provided for them. In some instances the accumulated weakness becomes distressingly apparent by the time the sixth standard is reached. Those who are not promoted, go over the same old work (even in the subjects they may have passed), at least for six months or a year. No provision is made to help them to come up to their regular class work, and they again fall back. One cannot understand in what way this benefits the pupils, unless it is that they become tired of their school work. It is desirable to have regular half-yearly adjustments, if not quarterly, and to make some special provision for the deficiencies.

Examinations.

Elementary schools have four examinations a year, one every three months. The headmaster conducts the first three, the last or annual being conducted by one or more of the inspectors. These examinations are not held at the same time at all places, as the same examiner has to examine about one hundred schools, and about six thousand pupils. He finishes the examination work at one school and then goes to the other, and so on, the whole tour requiring about six to eight months. If the pupil has for any reason to go from one school to the other, he is

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likely to find himself either far ahead of the pupils of the class he is in, or else far behind them. This can be remedied only if the examinations were held within a particular month or two, which can be done only in case most of the examination work be entrusted to the school teacher. Secondary schools have an examination in some one subject every two weeks. They also have the mid-year and the annual examinations. The fortnightlies are conducted by the teachers themselves. For the mid-years the headmaster appoints the examiners from amongst the teachers. As for the annuals, special examiners are appointed by the department.

If one looks at the basis of the examination and promotion system, he would find that very little confidence is placed in the teachers. In the elementary schools the teacher is rewarded or punished according to the examination results of his class. The parents as well as the examiners put the whole blame upon the poor teacher, as if he were responsible even for the backwardness of the child, which is due to mental or physical defects. If the child does not show good progress, the parents think that the teacher does not pay any attention to their child, and do not make any effort at home to help the work of the teacher. He has to prepare the pupils, not for their life work, but for the examinations, since the parents as well as the examiners judge his work by the examination results. They test only the ready wits and the retentive memories.

Teachers' Ability Judged by Examination Results,

This system, which prevails from the universities down through the elementary schools, has a very unwholesome effect upon the teaching. The teacher does not care to go deep into his subject and to impress the main principles upon the minds of the children, but

Examination a Test of Memory.

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puts an unusual stress upon memory work, and the principles not thoroughly grasped are superficially worked out to pass the examinations. The effect upon the pupils is very bad too. To them the examination is an instrument of torture. If one looks at the thin pale faces of the students at examination time, he can well imagine what a great strain it must be on them. In Europe and America the pupils are helped by skilled teachers, who make the work more interesting, and they are examined by more rational and sympathetic examiners. In India the teacher never reads new books on pedagogy, and is not at all acquainted with modern methods of teaching. In the university examinations, if one fails to pass even in a single subject by a few precent, he is required to appear again after one year to be examined in all subjects, although he might have received a high percentage in some of them. Owing to such repetition and worry one usually gets tired, and it would not be surprising if he were worn out at examination time with fear that he will have to grind for another year if he does not succeed.

Examination not a Real Test.

In their school life the pupils of India have always been submissive to directions. They learn faithfully what is offered to them without going out of the beaten path, but they make no attempt to contribute anything of their own. The goal is good examination marks, and they scarcely go farther in their work than is required by the standard of their tests. It is one of the greatest errors to think that schools must have some sort of standard for examining children to show their progress. Setting a standard for mental ability is against child-nature. Children are individualistic. The grown up authorities and examiners forget their own natures when children, and expect from the young all that they

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would from the mature. Moreover, "learners are not always ready to exprees what they have acquired. There are stages in the growth of learning when their knowledge refuses to reveal itself for show, and this may be a reason why so many boys of future eminence have been dullards at school. Their greater natures, besides rebelling against the unnutritious pabulum offered, did not grow in the examinable way. Perhaps, also, this is why those who enter college with conditions stand at least an equal chance of ranking high as compared with the seemingly brighter, unconditioned students, as Thorndike found in Columbia University."[1]

Cramming.

Orientals have been criticized for their memory work. But there was need of it in the past, when there were neither presses nor diffusion of books. There were very few text-books, which forced them first to commit the text to memory, and then to discuss and reason it out. In spite of the absence of those conditions at the present time, and in spite of the introduction of the Western system, no great efforts have as yet been made to remove this defect. It is regrettable to see even the European educators in India editing profusely annotated text-books, indirectly encouraging 'cramming.'

Examination Should Test the Formation of Right Character.

Humanity is trying to better itself through right behavior. The ideal of life is to obtain success in the attempt of being good ourselves, and of helping others to be good. This success can be secured through right actions and right character, which is the result of right habits. One of the aims of education should be to form right habits. The duty of the supervisor is to see whether the children get this sort of education The examiners have to see what sort of habits one has

1. Swift, E. J. Mind in the Making, P. 303.

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formed, and not what knowledge he possesses. The habits of the pupils will reflect to some extent those of the teacher also. Thus the examiner will be able to kill two birds with the same stone. By careful observation of the one, he will know what the other is. His business will be to see that the right sorts of habit are encouraged, strengthened, and deeply rooted, and the wrong sorts inhibited, or extirpated. This will result in the teacher getting more freedom, greater enthusiasm and definite successes which will set the current moving in the right direction.

CHAPTER IX.

EDUCATION IN ITS RELATION TO THE COMPOSITION OF THE POPULATION.

(1) PROBLEM OF RACE.

All progress, social, political, or economical, depends upon the education of the masses. It is a regrettable fact that more attention is not paid to it by the authorities in India. However, the leaders of thought have now been aroused. They have found it to be not only just and human, but expedient for the advancement of the country. After the caste system became very rigid, those who did the work of cleaning the streets, removing dirt and dead animals, and tanning hides, or who engaged in similar occupations, were not touched by the higher castes, owing to their uncleanness. These people formed the untouchable class. They and the non-Aryan aborigines did not receive any education at all. The bad treatment that they received forced millions of them to become Mahomedans and Christians. Several thousands are doing so every year. It is now high time for the Hindus to wake up and embrace their long neglected brethren. Efforts were made at different times by superior

Depressed Hindus

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geniuses, master minds, and great devotees of God, to remove this sin of inequality. Buddha, Eknath, Narsinha Mehta, Kabir, Nanak, Dayanand, and others made efforts to raise their social status by their talks and actions. Ramanuja proclaimed to the world that "if salvation were not to be with the low and the degraded, to hell he would go." Who knows that their number is about one-fifth of the population? What can be done to improve them? We can affect their heredity to a very small extent, but we can change their whole environment. We can create in them habits of cleanliness; we can give them better employment; we can give them higher ideals, and all this through education. We can allow them to touch us provided they keep themselves clean in body and clothes. His Highness, the Gaekwar, in one of his articles writes:

"I trust that it will not be long before the educated members of the community, whether officials charged with the execution of educational policy or the general public, awake to a sense of their duty in this matter and come to the assistance of the government. They should no longer cherish the absurd prejudice that the lower classes, who are only the victims of harsh circumstances and antiquated social laws, were made inferior or impure by God, nor treat them with contempt, and when forced by their official duty into contact with them, do it coldly and grudgingly instead of endeavoring with zeal and earnestness to help and improve them. Nor should they think, as some foolishly do, that these were specially created to be our servants and that by educating them this heaven-sent provision will disappear. The kindred idea held by some members of the higher castes, that the lower castes should be kept in ignorance, or the veneration in which the Bra-

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hmans are held by the lower castes will be lost, is as groundless as it is unworthy. Even if educated, all will not rise beyond a certain level of intelligence; and if they do, it will surely be a matter for national rejoicing rather than for regret. On the education of these classes depends the welfare of the community of which they are a part; for it cannot advance with one part of itself and remain behind with another; there must be proportionate progress all around. We ask, not unnaturally, for political rights, but, in my opinion, our own social improvement is of even greater importance. The claim for political equality does not come with grace from those who cling to such extreme social inequalities among themselves and argue that the lower classes should snatch equal treatment from them, rather that they should extend it from a sense of justice and right reason. It is amusing to see some of our people, either from discontent or from a habit of talk formed by their education, pose as radicals and republicans; perhaps, if they were to apply their principles first in social matters like these, their political outpourings might not wear the appearance of self-interest or a mere literary exercise. We talk much also of social reform and improvement, but we ought to realize that, once the lower classes are educated, all that so many efforts of individuals and social reform congresses could not accomplish will be swiftly done by the working of natural forces. Otherwise, we may waste long periods of effort, and the result will be little or nothing. Therefore, I hope that our society will take as great a share as it can of the burden of this work, though I fully recognize that in a country, poor like ours, and in no degree self-governing, we must look ultimately and for the larger part of the work to the Government. If there were several Tatas in India,

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to establish colleges and institutes for research, or if here were Carnegies and Rockefellers to vie in educational munificance, the burden might be largely lifted off the state; but there is no reason why private men should not even here follow, according to their means, such high examples of liberality and public spirit."[1]

Antyaja Schools.

His Highness being so enthusiastic about universal eduction, the education of the Antyaja or the non-touchable class began in the middle of eighties. In 1889-90 there were ten schools teaching 783 children. Within five years the number of schools increased to twenty-one. In 1899 there were twenty-five schools attended by two thousand children. When the education was made compulsory, this number rose to 247 schools and 9269 pupils. In 1910-11 there were 283 schools for boys and 5 for girls, having 9,388 boys and 307 girls; moreover there were 5,303 children in ordinary village schools and 543 in other Gujarati schools where separate schools could not be established, thus making a total of 15,541 Separate schools are opened wherever possible. But when the number of children is less than ten, they are made to sit in the same place, but at a little distance from the others, This condition exists in many village schools. The Antyaja population is 174,289 This shows that 89 per cent. of their population, and taking the boys only, more than twelve per cent. go to the schools.

They are given encouragement in all possible. ways. One hundred and twenty-two rupees are spent every month in giving small scholarships to several deserving students. A sum of 5,828 rupees or more is spent annually for an Antyaja boarding house at Baroda, for providing food, clothing, and all other necessities to some

1. Gaekwar, S. R. Articles on Education. p.p. 85-86.

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promising but very poor students. It is under the direc supervision of Mr. Atmaram, the inspector of Antyaja schools, who is a well-educated and broad-minded man. Here they learn clean habits and good manners. A combination library and reading room has been opened in the boarding house, and a teacher has been provided to teach English. It has thirty-five boys and six girls. Another boarding house has been started at Patan for thirty boys. About five thousand rupees are spent every year for supplying all the children with books, slates, and other articles necessary for school use. More than 50,000 rupees are spent every year for their education. Moreover, 60,000 rupees have been sanctioned for building six good school buildings for them. Scholarships are also awarded to those that want to learn English.

These people who have been under the iron grip of custom so long, are now progressing by leaps and bounds, whenever they are allowed opportunity. Their progress in some of their schools within eight months has been as much as that of others in two years. I may as well quote a happy experience I had while visiting one of their schools, which showed the spirit even of the older people. It was the Antyaji girls' school at Unjha, where I had a little talk with one of the leaders of their community, who, while the girls were singing a Garaba (a song sung while moving in a circle and keeping time by clapping with the two hands), remarked to me, "Within a few years you will see our women become Nagaranis (a word used by him for the women of the Nagar Brahman caste, who are considered very refined)." To a thoughtful person there is a deeper significance in these words which those who oppose their progress may realize later. Mahomedans were appointed as their teachers, but now their own men are qualifying themselves to

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become teachers and are given preference. Orders also have been passed by the State to appoint qualified men of this community in the various departments of the State.

Hindu inspectors are required to visit and examine these schools. It is also ordered that a Hindu teacher, if he takes up the work of an Antyaja school, will be given half as much again as his pay and a special reward for his moral courage in setting aside his caste prejudices. Tremendous efforts are being made to break down the rigidity of the caste barriers.

Aborigines.

The state has a population of 115, 411 aborigines, made up of 58,858 men and 56,553 women. They are hill and forest tribes, and it is very hard to get hold of them. Great attempts are made to educate them and bring them to civilization. With such an aim in view, a boys' boarding school was started for them at Songad in 1885, two more at Vyara and Mahuwa in 1892, and one for girls at Songad in 1898. Each of the three for boys accommodates one hundred boys, and the one for girls, fifty, making a total of 350. Some of them have begun to study English. Those who finish the work and leave the school take to agriculture and scarcely crave for state service. After a vacation it is hard to get the girls together. An old experienced teacher is employed who knows their ways and manners, and successfully persuades the parents to send them.

Special Work.

Every week they meet together to discuss moral and educational subjects. The vice of drinking is dying out, and an association called Anarya Hit Vardhak Sabha (an association for increasing the welfare of the non-Aryans) has been started. There was keen competition for a prize offered for the best composition on "How to improve your condition."

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Vocational Education.

Carpentry classes were established at Songad and Vyara in 1890 and 1905 respectively. The course has been divided into six standards. The boys are taught to repair their agricultural implements, and prepare wooden articles for daily use. This course is of very great practical use to them, as there is a want of carpenters in the little village hamlets where they live. These schools are also provided with large model farm to give them practical agricultural training, agriculture being their profession. They are shown improved methods in agriculture and experiments are made with seeds from different countries. Sericulture is taught to those who are in the sixth and seventh standards, and it is hoped that it may turn out to be a very profitable vocation for them. Lace-making is taught to the girls, in the absence of some other more useful subject. The girls, after they get through the school, generally do household work and help their husbands in cultivation. Three of them have joined the Female Training College to become teachers. The expense of these institutions in 1908-9 was 23,798 rupees.

(2) PROBLEM OF LANGUAGE.

There is another great question—the question of languages. The people speak so many different languages that it becomes hard for the educational department to carry on its work to the satisfaction of all. In Baroda State the following is the census according to languages:

Language	Population	Percent. of total population
Gujarati and allied	1,902,654	93.6
Punjabi	234	
Rajasthani	3,410	
Western Hindi including Urdu	73,159	3.6
Marathi and allied	36,145	1.8
Multani	40	
Northwestern group including Kachhi	16,129	.8

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Laugnage	Population	Percent. of total population
Bengali	36	
Naipali	12	
Kashmiri	2	
Persian	13	
Bloch and Pashto	324	
Dravida group	94	
Telagu	265	
Arabic	32	
Portuguese, English and French	289	

The Gujarati speaking population represents 93. 6 per cent. of the whole, and Gujarati is the state language. People speaking Urdu and allied are 3. 6 per cent., and Marathi and allied are only 1.8 per cent. Since the state language is Gujarati, and the business is also carried on in that language, the other six per cent. of the population have to know some Gujarati. It is therefore desirable to have all educational work carried on in that language. Wherever there is a number of children of the Urdu or Marathi speaking people, who wish to learn their own language in addition, a special teacher can be given for that purpose. However, sacrificing the principles of unity, the State has provided Urdu and Marathi schools and classes.[1]

1. His Excellency Sir George Clarke, the Governor of Bombay, in a recent speech at the Mahomedan Educational Conference held at Poona said:—"I hold that wherever a large number of children, whose habitual home language is Urdu, are congregated, we ought to provide Urdu schools.....On the other hand I believe that it would be most unwise in your own best interests to press the Urdu language on children who have habitually to speak a vernacular and who will require that vernacular throughout the course of their working lines."

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The Mahomedans in the state number 160,887. All of them do not use the Urdu language. Urdu and allied languages are spoken by only 73,159 people-less than 50 per cent. of the Mahomedan population. There are fifty-four Urdu schools for boys and twenty-six for girls, attended by 5,906 boys and 2,041 girls, the total being 7,947. This shows that about 11 per cent. of the Urdu speaking population are in the Urdu schools. Over and above these 4009 Mahomedan children study in the Gujarati schools, and 3,857 in the Village schools thus making a total of 15,813 out of 160,887, that is 9.9 per cent. of their population.

Urdu Schools.

One Urdu educational inspector and one urdu deputy educational inspector are appointed for the inspection and examination of these schools. Such schools are opened in case forty children of that class can attend the school. An urdu school means a school where a certain amount of Urdu is taught; otherwise their circulum is the same as that of the Gujarati schools.

The Marathi speaking population is 36,145. There are 21 schools for boys and nine for girls, teaching 2,375 boys and 1,116 girls, and 3 grant in aid schools having 167 pupils making about 10.1 per cent. of their population. A Marathi deputy educational inspector is engaged for supervising and examining these schools. Mahomedans are people of a different religion, but the Marathi speaking people are almost all Hindus.

Marathi schools.

The United States has solved the language problem very wonderfully. There are places in the country where there is a majority of German, Irish and other nationalities. However, English, which is decided to be the language of the whole country is also the language in which the school work is carried on. French,

Example set by the United States.

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German, Italian, Spanish, and others are taken up in the schools as modern foreign languages. People from almost every foreign country come here. The parents keep on speaking their own language, but the children who go to the schools within a short time after they land begin to learn and speak English. They no longer remain Germans, Italians and Hungarians, but become Americans. Why can not a similar solution be arrived at in Baroda? For the unity of the State, people have to sacrifice their individuality. Patriotism means my country first, and myself afterwards.

Baroda State has no intention of abolishing these schools, as it is against its policy, its main principle being to satisfy its people's wishes. However, it is the duty of the leaders of these communities to be patriotic, to look to the question of unity, and to set aside their individual prejudices. Rather, it is their duty to request the State to do away with these differences, and show to the world that they are appreciating the educational advantages they have been obtaining, and are desirous of seeing unity in the State even at the expense of their individual prejudices.

CHAPTER X.

THE SCHOOL AND ITS PUPILS.

Social intercourse is the crying need in the schools of India. First of all there should be a very healthy social connection among the teachers themselves. Both in and out of school hours they ought to mix on grounds of equality. Teachers' associations no doubt offord a great opportunity for such a purpose, but there too, outside the regular formal work, time must be set apart for informally talking and getting acquainted with each other. The people of India are not as formal as hose of the Western countries, and they don't need

Social relations between teachers.

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introductions. However, they observe a sort of formality of superior and inferior positions. The head master or any higher officer who is present at such meetings should make it a point to put aside his so-called dignity in furthering this social spirit.

Teachers and Pupils.

Social intercourse between the teachers and pupils is another necessity. The teacher should come down from the high pedestal on which he usually sits, and should remove the awe in which he is held by the children. He should rather inspire more confidence in them. He should make them trust him through sympathetic attitude and sound advice in all their affairs, and should trust them in return. This will give him a kind of influence over them which may turn out to be more beneficial to them than even the influence of the parents. Children naturally do not like to talk on certain matters to their parents. The human mind is such that it needs to express its thoughts and feelings to some one, and the children are prone to inquire into those regions of which they are ignorant. If the teachers do not invite this confidence, it is likely to be given to an undesirable companion. The teacher can therefore wisely occupy this place and direct the energies of his trust in the right direction.

School and Child.

Education is intended to fit one for social life. A good citizen is one who earns his own living, and is not a burden to the state or society. A full grown individual cannot be disregarded if society is to advance. Horace Mann says, "Where anything is growing, one farmer is worth a thousand reformers." Schools need to keep this in mind, and change as society changes. School education, therefore, is to make one a good citizen, and fit him for society. In John Dewey's words, if we can connect the "New Education" with the general march of events,

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"it will lose its isolated character, and will cease to be an affair which proceeds only from the over-ingenious minds of pedagogues dealing with particular pupils. It will appear as part and parcel of the whole social evolution, and, in its more general features at least, as inevitable."[1]

School itself is merely society in miniature, the teachers and the pupils being the individuals. This society should also have all possible activities. It is very desirable to make this society self-governing. Let everything in the social activities, as well as in the class work, be managed by the pupils themselves, with the teachers acting merely as guides to be consulted when difficulties arise. It would be very beneficial to establish institutions in connection with the schools with social, philanthropic, and ethical interests.

The pupils should not feel that the school is something different from society. Its customs, manners, moral and ethical code should be in conformity with that of society at large. The school should look to the "training in habits of order and of industry, in the idea of responsibility, of obligation to do something, to produce something in the world." The child should become "the sun about which the appliances of education revolve;..... the centre about which they are organized."[2]

Clubs and societies should be encouraged in order that the social relations of the pupils may be strengthened.

The Interrelation of Pupils.

School organizations and class spirit are unknown in India. These can be brought out and fostered through interclass contests in all possible matters. School spirits or love for Alma Mater can also be developed through the introduction of school colors, flags, pins, and other emblems. This spirit and such organisations will be a

1. Dewey, John. The School and Society. p. 20.
2. Dewey, John. The School and Society. p. 51.

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great help to the teachers, even in maintaining the class and school discipline.

In increasing the social contact, boarding houses play a great part. There are twenty-one such boarding houses in the Baroda State, where students board and lodge. They are connected with different institutions, one with the Baroda College, one with the Kalabhavan, one with the Male Training College, one with the Female Training College, one for Patels at Amreli, one for the Patan High School, one for the Amreli High School, two for Antyajas, four for the Aborigines, five for Anglo-Vernacular schools, and three for Sanskrit schools. The standing of the boarding students, according to the educational report of the State, is better than that of the day students, which is due to the guidance of able superintendents. More boarding houses should be provided, and all those who do not live with their parents should be made to reside there.

The school merely does the work of instruction, and hardly pays any attention to the care of pupils. In the words of Dr. Wood, "If modern education is to fulfil in any worthy degree its complex of obligations to the child, to the home, and to society—in its relation to health—provision must be made in the school for the following phases of administration, supervision, and teaching:

Care of Children.

"I. The health-condition of the pupil should be thoroughly investigated when he enters school and at intervals thereafter, indicated by the age and individual need of the child. Estimation should be made so far as may be possible of the pupil's capacity for biologic, mental and moral development, so far as this is dependent upon physical condition and health status. The home should furnish information about personal history and habits of the pupil which may contribute to a better adjustment of the child's education and daily life at home

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or in school. Physical defects should be recognised and reported to the parents. If these defects are remediable the school should co-operate tactfully with the home for their care and removal. The limitations, capacities and tendencies of the individual should be understood as clearly as may be, and such knowledge should be utilized in every practicable way in the child's education. Daily and adequate inspection by teacher, nurse, and physician should insure all that is possible for control and prevention of infectious and contagious diseases.

"II. The school environment should not only be free from deleterious influences, but favourable in every material detail to the highest welfare of the pupil. All the features essential to the health of children-in the school house, its surroundings, construction, furnishings and equipment-are within the power to provide, of practically every community in the country. The expense of the things which really affect the health of the pupil in school should be estimated in terms of child-life, child-health, child-efficiency, and only for convenience reduced to dollars and cents. The school should be made, and may be made, the most sanitary place in the community.

"III. All the methods and materials of instruction, including the teacher even, should be wisely judged, selected, and adapted with partial and primary reference to their effect upon the health of the pupil. Nothing in modern education which is vital to the schooling of boys and girls need endanger, except through accident, the health and well-being of any pupil. The hygiene of instruction has received far too little attention.

"IV. A dominant chord combining two main notes, in close harmony, should run through all the education of the child.

(a) The teaching at every reasonable opportunity of the principles of healthful living as related to the individual, the home, and the community.

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(b) The inculcation in the pupil, by every practical means, of hygienic habits, so that his conduct affecting himself and those about him may contribute to healthful and successful living.

"V. Provision should be made in school for the physical training of the pupil. The child will engage in some of the desirable fundamental motor activities outside of the school in work or play, at home or elsewhere. The improving curriculum requires progressively more of the large efforts of the body and of the motor brain centres. It is the business of the school in physical education to secure for the pupil that margin of neuro-muscular training, not otherwise provided, which is necessary to health and to the development of those mental, moral and social qualities which are required for human efficiency in the large, and which are therefore necessary to complete and successful living."[1]

Every one admits the need of good school buildings. Every year the state builds a few. In 1911 the number of state buildings for schools was 195 and several were under construction. A sum of 100,000 rupees is set aside annually for the construction of school houses to be built through the Public Works Department. However, their plans need a revision. New plans should be made with the co-operation of the educational department, who knows what it needs, in point of light, air, and other conveniences. All the equipments of the school must tend to reduce to the lowest point the waste of nervous energy in pupils. The buildings as well as the equipment should be completely sanitary, with sufficient open space all around for garden and play. Some of the schools are provided with these necessaries though all must have them.

1. National Society for the Scientific Study of Education. The Ninth Yearbook. pp. 10-11,

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Very recently orders have been passed for medical examination of the pupils. But before such an examination from professional medical men, teachers might make some non-professional tests and save the time of the doctors. The teachers can make the eye and ear tests, and can take the height, weight, and lung-capacity measurements. The defectives found by the teachers in their examination, can be examined by the doctors.

School and Parents.

Since the teacher is paid by the State, he has forgotten that he is a servant of society. He forgets that the money he receives is paid by the people. He thinks he is an officer of the State, and has to rule over the people. He does not care to approach the parents. This condition needs a radical change. One of the important duties of the school is to approach the home of the child, and to invite the co-operation of the parents. Parents' meetings can be called to discuss how the parents and the schools can assist each other in their respective functions. Parents might be called to be present at their children's medical examinations. They can be invited to some of the social gatherings of the pupils. The school can organize series of lectures on subjects of moral, physical, and social importance, like sanitation, hygiene, prevention of diseases, bringing up of children, how to impart moral education in the home, and such others; and invite the parents as well as other people of the neighborhood. The school can increase its influence by taking parents into its confidence and assisting them in organizing associations that may be very useful to them. The school can also allow them the use of its library, and even the building if it be needed as a meeting place for their associations or clubs. Thus the school can become a very useful social centre, and a powerful socializing organization.

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CHAPTER XI.

EDUCATION OF GIRLS.

The State of Baroda has been a great believer in the education of women. The first attempts were made as early as 1875 by establishing two girls' schools, one at Baroda and the other at Petlad. However, a real impetus was given to it by the order of H. H. the Maharaja Saheb, issued on August 20th, 1885, in which he expresses his noble ideas in the following words:

His Highness: Education of Girls.

"Touching on the moral education of youths I would necessarily emphasize the education of girls. It is the unremitting watchfulness and conciliatory supervision of intelligent and educated mothers which form a powerful factor in giving the right tone to infant minds and eradicate all crooked ways. Women regulate the social life of a people, and in this sense the men and the women rise or fall together. The first thing that strikes a careful observer is the barrenness of our homes. That pure delight which intelligent companionship and freedom of social intercourse alone can secure is almost unknown in the domestic circle. To fit the girls for the high functions in social life, without which rational and moral companionship, marriage would be a misnomer, and cannot exert an elevating influence on character, I would give my best attention, to the opening of girls' schools."[1]

Public education for girls was a new idea, and the people did not like it. According to John Stuart Mill, as long as the people have not 'attained the capacity of being guided to their own improvement by conviction or persuasion' they have to show 'implicit obedience to an Akbar or Charlemagne, if they are so fortunate to find one.'[2] In Baroda the order from throne brought about

1. Modi, C. T. Report on public instruction in the Kadi District, Baroda State; p. 20.
2. Mill, John Stuart, On liberty, p. 15.

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a change which would not have occurred even within a century. The rapid increase in the number of schools and pupils in the last two decades is very promising.

	1889–90	1899–1900	1909–10	1910–11
Number of schools	35	97	348	347
Number of pupils	3,415	15,142	45,983	54,479

The maximum school age for girls is 13 among the Hindus, and 15 among the Parsis. The following table shows the number of girls of various ages in school in 1908–9.[1]

School Age: girls.

	Village schools		Ordinary schools & other institutions		Total	
	No. girls	percent.	No. girls	percent.	No. girls	percent.
Above 20 yrs.			64	.2	64	.15
Of 20 ,,			26	.1	26	.06
,, 19 ,,			9		9	.02
,, 18 ,,			15		15	.03
,, 17 ,,	1		29	.1	30	.07
,, 16 ,,	2		30	.1	32	.07
,, 15 ,,	6		59	.2	65	.15
,, 14 ,,	43	.3	147	.4	190	.4
,, 13 ,,	81	.6	400	1.2	481	1.1
,, 12 ,,	472	1.3	1,175	3.8	1,347	3.0
,, 11 ,,	683	5.0	3,279	10.5	3,962	8.9
,, 10 ,,	2,078	15.3	6,757	21.8	8,834	19.7
,, 9 ,,	2,725	20.0	7,300	23.3	10,025	22.5
,, 8 ,,	3,094	22.8	5,446	17.5	8,540	19.0
,, 7 ,,	3,086	22.6	4,084	13.0	7,170	15.95
,, 6 ,,	1,284	9.4	1,796	5.7	3,080	6.7
,, 5 ,,	370	2.7	647	2.1	1,017	2.2
Total	13,625	100.	31262	100.	44,887	100.

At present most of the girls do not complete even the elementary course, but the effects of the compulsory-education-law will be seen within a few years. Many girls will continue their studies in the higher standards.

1. Baroda State, Report on Public Instruction, 1910–11 82.

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The number of girls in the higher standards in 19-10-11 was:[1]

	3rd	4th	5th	6th	7th
Gujarati schools	1279	468	149	56	18
Marathi ,,	95	58	34	15	5
Urdu ,,	63	25	8	4	...
Antyaja ,,	34	9	12	...	...
Village ,,	14	5	...	...	...
Navajbai Tata Parsi girl's school	35	34	16	13	16
	1520	599	219	88	34

The Gujarati and Marathi schools contain pupils who speak those languages, almost all of them being Hindus. All the Urdu school girls are Mahomedans, while the Antyaja school girls belong to the non-touchable class. The large number of pupils in the higher standards of the Parsi girls' school is due to the fact that the Parsis as a rule do not marry their girls so early as the others and encourage them to continue their studies. On the whole the number in the higher standards is steadily increasing in all the Schools.

Special attractions.

People have not yet fully understood the value of good education. Every effort is being made to make them appreciate the necessity of at least the elementary education. A sum of twenty rupees per month is awarded to girls' schools at Baroda, Petlad, Patan, and Navsari, to give scholarships, as an encouragement to those that continue their studies in higher standards after they are elet ven years old. This sum needs a substantial increment, as long as the popular opinion is not created, inasmuch as it is a great inducement for the parents. Embroidery, drawing, and culinary arts are taught in schools at Baroda, Patan, Navsari, Gandevi, and Visnagar. Music is taught in the schools at Baroda, Patan, and Navsari. Tailors are provided for many schools to teach needle-

2, Baroda State, Report on Public Instruction, 1908-9, p. 34,

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work, which is greatly appreciated by the parents. Sanskrit is taught in Gujarati and Marathi girls' practice-schools; and lace-making, including pillow-lace, and sericulture, to the pupils of the Dhanka girls' boarding school.

A special curriculum, easier, and with subjects fitted for girls, is made for the girls' schools. The following is the weekly program of hours for different standards of girls' schools.

Program.

	Below Standard	1st	2nd	3rd	4th	5th	6th	7th
Arithmetic	4	8	7	7	6	6	6	5
Reading	7	9	7	7	7	6	6	6
Writing			4	3	3	3	3	2
Geog. and History				1	2	4	4	4
Cookery							1	2
Needlework		3	3	4	4	4	4	3
Science								3
Drawing								1
Singing			1	1	1	1		
General knowledge	5	6	4	3	3	2	2	
	16	26	26	26	26	26	26	26

General knowledge includes singing, drawing, stories, games, drill, object, lessons, and kindergarten, when any of these subjects is not mentioned separately.

Kindergarten includes Frobel's gifts, occupations, and drawing; claywork, paper folding and cutting, mat work, and number work with beads, seeds, etc.

The "below standard" is composed of three divisions, for the convenience of the newcomers, who can join the school at almost any time. The work of the three divisions is expected to be finished within a year. It is more like that of a regular kindergarten class, but it is very formal, even the drawing following Froebel's plans. It is under the complete control and guidance of the teacher, who follows the fixed time table and does not inquire what the children would like to have

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at a particular time. All the suggestions and plans come from the teacher, and the children are scarcely required to show any independence at all. Formal reading, writing, and arithmetic, occupy most of the time even in this year, and continue to do so throughout. The first and the second standards also have more kindergarten subjects. Needlework is a special feature all through and is done splendidly. Cooking is introduced in the sixth and the seventh standards. Almost every Hindu girl whose parents are not very rich, learns cooking and other household work at home from her mother.

Co-education.

Wherever there are more than forty girls in a community, a separate school is established. If the number is less, the girls attend the same school as the boys. In many villages the schools are of a mixed character. In 1910-11 of the 54,479 girls in the state institutions, 28,083 were in mixed schools, that is, about fifty one per cent. were under co-educational conditions. The girls have to leave these mixed schools when they are twelve years old. If they want to continue their education, they are required to go to a girls' school having a woman teacher.

Zenana Classes.

The Zenana[1] classes are intended to serve those women who cannot attend the regular schools owing to their advanced age and lack of time. Four classes have been started, one at Petlad, one at Navsary, and two at Baroda. Two hundred and sixteen women attend them regularly. The classes are held for three hours in the afternoon, when women can generally find leisure. Instruction is imparted in reading, writing, keeping accounts, needlework and embroidery. These classes do not attract a very large

1 "Zenana" is an apartment set aside for women where they live in seclusion, and hence the word is used for women who live in seclusion and do not attend public schools.

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number, probably because most of the women have many domestic duties, and find it hard to spare even the little time required. However, a still greater number of women might be attracted by introducing economically important subjects such as gold and silk embroidery, knitting, crocheting, and lace-making. Subjects of physical importance, like sanitation and hygiene, would also be helpful in the bringing up of children and in other household and public affairs.

English classes.

To ascertain whether girls would take to the study of the English language, English classes were opened in June, 1907, at Petlad, Patan, and Visnagar. Experienced teachers selected for this work find that even though the girls themselves are willing, it is very hard to persuade the parents to allow their daughters to take up the study. The extreme conservatism of the people of India is constantly coming to the fore. In this instance they doubted the utility of English study, and asked if it were going to be of any use in after life. Furthermore, they added that their daughters were not seeking to obtain any government or private employment. Similar questions were likewise raised when the girls' schools were started, and also when education was made compulsory. However, patience and perseverance will overcome their prejudices in due time. In 1908–9 twenty-one girls attended the class at Petlad, forty-one at Patan, and twenty-three at Visnagar. These classes are expected to become the feeders of the girls' high school at Baroda.

Girls' High School.

English was for the first time introduced in the female training college on February 16th, 1905. The girls from the Gujarati and Marathi girl's school No. 1 attended. A good beginning encouraged the state to start a high school. Pupils from the third standard onward attend the high school. The

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first five standards are fully organized, and two girls were being prepared (1910–11) for the University entrance examination. The Bombay University syndicate was pleased to affiliate the institution as the 'Baroda Girl's High school.' It was attended by 171 girls in 1910–11, of whom 36 were in standards higher than the third. One girl was sent up* and has passed the University Matriculation examination.

Female Training College.

The people of India prefer to have women teachers for their girls. To provide for this necessity and to satisfy the prejudices of the parents, a female training college was started as early as 1882. Students admitted are of two kinds,–paying and scholars. The scholars receive scholarships verying from six to ten rupees a month. A sum of 500 rupees is spent for this purpose every month. The scholars have to give a bond ensuring good conduct and progress, and binding themselves to serve the State for a stated period, usually three years. A majority of the students are widows and most of them Brahmins, who find a new and respectable occupation through which they may earn their livelihood. All possible facilities are afforded to the husbands or nearest relatives to discharge their duties as protectors and guardians. A boarding house under strict supervision is expected to attract a greater number to the College. There are 43 boarders at the present time (1910–11) out of 69 in the College.

The course is of five years, with a preparatory class in addition. The year has two terms, the first from the end of November to the middle or end of April, followed by a summer vacation, and the second from June to the end of October, followed by a winter vacation. All teaching is done in the vernacular. The preparatory, first, and second years are equivalent to the vernacular

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fifth, sixth, and the seventh standards of any girls' school. The third, fourth, and fifth years are pure college years, where the candidates for teachers' certificates are instructed in subjects required for a teacher. The following are subjects assigned for each year:

Preparatory	1st year	2nd year	3rd year	4th year	5th year
.....		Language			
.....	Arithmetic		Botany	Zoology	Chemistry
Mental Arithmetic	Practical Geometry		Zoology	Political Economy	Domestic Economy
.....	History			Kindergarten	Kindergarten
.....	Geography		Kindergarten	Psychology	Psychology
Hygiene	Physical Geography	Astronomy	Object Lesson & Criticism	School Managem't	Child nature
.....	Cooking	Botany		Practice	teaching
.....		Drawing			
.....		Needlework			
.....		Music			
.....		Gymnastics			

Hindi is taught to all the Pupils.

About 75 women have been trained in this College, and of them 65 are in the state schools. In 1884-5, there were only four women teachers in the State, 22 in 1890-91, 65 in 1899-1900 and 125 in 1910-11. The number is still very disappointing. Out of the fifty-four thousand girls studying in the schools, about twenty-six thousand are in girls' schools and about twenty-eight thousand in the mixed schools. If women teachers were provided only in girls' schools, about one thousand of them would be needed. Are there any substantial causes of the reluctance of women to take up this work? Can the State do anything to attract them? These are problems which the educational department has to solve in the near future.

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CHAPTER XII.

SPECIAL INSTITUTIONS AND CLASSES.

With a view to encouraging arts and industries and to give their practical knowledge through the Gujarati language, an institution called Kalabhavan, meaning College of Arts and Industries, was started in 1890, under the direct supervision of Professor T. K. Gajjar a man of wide repute and a practical scientist. It was brought under the control of the educational department in 1895. It contains schools of art, civil engineering, mechanical engineering, chemical techonology, weaving, watch-making, pedagogy, and commercial technology.

Kalabhavan.

There is a three-year course in all the schools, with two terms a year. Those who pass the final examination are given the diplomas of Licentiate of Art, Licentiate of Architecture, Licentiate of Mechanical Technology, or Licentiate of Chemical Technology. Those that want still more proficiency in any particular subject pass one more year there, and every facility is given for practical business experience.

Every student is charged one rupee as admission (matriculation) fee. A fee of three rupees per term is charged for the Schools of Art, Civil Engineering, and Chemical Technology; a fee of ten rupees in the School of Mechanical Engineering, and two rupees per month for Commercial Technology. However, a student registered in any other school of the Kalabhavan, or in the Baroda High School, is privileged to pay a rupee and a half per month. Schools of weaving, watch-making, and pedagogy are free, and no admission fee is taken from artisans, Mahomedans, and poor students.

According to the convenience of the schools, a certain number of students is admitted to the schools of art,

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weaving and watch-making, preference being given to the Baroda subjects. An entrance examination in arithmetic is required of those who want to join the schools of civil engineering, mechanical engineering, and chemical technology, preference again being given to Baroda subjects. A candidate for the school of commercial technology should have studied six standards of an English school; one for the school of mechanical technology should have gone through six standards of the elementary school, or three standards of an English school, and must be seventeen years old; while candidates for other schools must have the same prerequisites as those for the school of mechanical technology, but may be thirteen years old.

Three kinds of students are admitted:

1. Regular students–those that take the regular courses.
2. Artisan students–carpenters, blacksmiths, weavers, and watch-makers, who work all time in the workshop for a certain period, just to obtain the practical knowledge Such a student of carpentry must do full-day work for three years.
3. Special students–Those that want to take particular studies and not follow the regular curriculum.

The second and third group are admitted in case they do not interfere with the regular students.

ENDOWMENTS FOR THE INSTITUTIONS ARE:

State scholarships--A scholarship of from two to five rupees a month is given to worthy students in different schools.

Cassella Co's scholarships–The Bombay branch of Messrs. Cassella Co. of Germany gives ninety rupees a month for scholarships in the school of chemical technology.

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D. B. Dhamnaskar scholarships--Two scholarships of four rupees a month each, are given from the interest of the fund raised by the admirers and firiends of D. B. Dhamnaskar, the late Prime Minister of the Baroda State.

Other scholarships--Some of the native states of Kathiawar and Gujarat and the Director of Public Instruction of the Central Provinces award several scholarships. to students from their provinces. A boarding house has been opened for the convenience of those who come from long distances. Lodging is given free, but they have to pay for their board. A superintendent takes care of these students.

The school of watch-making was closed on the 1st of November, 1908, and the school of pedagogy or the male training college was separated and put under the direct control of the Vidyadhikari on the 1st of December 1908. During 1910 there were 479 students, of whom 316 were from the Baroda State, 51 from native states of Kathiawar and Gujarat, 93 from different parts of the Bombay Presidency, 17 from the central provinces, 1 from Madras, and 1 from Bengal, that is, 112 from the British provinces.

The work-shops attached to the Kalabhavan made a profit of 8,999 rupees in 1909--10. They made office and school furniture and various useful articles of wood and metal for medical, revenue, engineering, and water works departments, as well as for the palace and the museum. They execute private orders also.

The Talati Technical School at Navsari is doing very good work. A new work-shop is attached to it, and courses are offered in mechanical engineering, dyeing, and cabinet-making. This school is purely a private enterprize. There

Industrial Schools.

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is an industrial school at Amreli with 60 boys. The curriculum contains elementary, theoretical, and analytical chemistry, elementary physics, elementary knowledge of dyes and practical dyeing, drawing, a little carpentry, weaving on simple looms, very little English, Gujarati, and arithmetic as much as is done in the sixth standard of the vernacular school. It is more like a trade school. It needs a revision of curriculum and an expert staff, who are acquainted with the people, and the industrial and economical condition of the places where they have to work.

Evening Class for Artisans.

An evening class for artisans was started in 1906 for the benefit of the artisans who are mostly occupied in their professions during the day. In addition to reading, writing, and arithmetic, it was planned to teach them the principles underlying different mechanical trades, which may result in an improvement of their work, and enable them to earn higher wages. Tuition is given free. In 1909-10, 44 men took advantage of this class, representing different occupations, viz: carpenters, wood-turners, gold-and silver-smiths, blacksmiths, bricklayers, potters, molders, barbers, stone masons, tailors, etc. Drawing and carpentry were introduced. All of the students took drawing, and several carpentry.

Manual Training Classes.

Manual training was introduced in 1899, and is now offered, in eight schools. Boys of the fourth, fifth, and sixth standards of the vernacular schools are allowed to take it. Drawing, carpentry, and clay-modeling are taught. It seems that this manual training, which was not much liked by the pupils owing to the ideas of caste aristocracy, is becoming more and more popular every year. In 1909-10, 1,864 pupils took advantage of this Institution.

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Night schools were established for the convenience of those grown-up people who would not like to join day schools, owing to their age, and night Schools who cannot join the day schools as they are occupied during the day in some bread-earning processes. There are six such schools, with 306 pupils of which the Mehlao school has 123 pupils, 23 of them being women of the Baria community (a community engaged in labor and farming). The school hours are from eight P. M. to ten P. M. The curriculum is very easy, consisting of the three R's, and is divided into four standards.

Schools and Classes.

Music[1] is recognized by the State as a part of human accomplishment, and as an element of a liberal education. It needs to be revived, and made a household necessity. The first music school was opened at Baroda on February 1st, 1886, under late Professor Maula Bakhsha. He was born in northern India at a time when theoretical science of music was altogether neglected by the professional musicians of the north. After acquiring practical knowledge of northern music, he studied under the late Professor Ghasitkhan at Baroda. He had to undergo all the troubles that a student in India generally undergoes when he has to gain knowledge from an orthodox teacher. Thence he went to the Deccan (southern India) where the theoretical science was preserved. He studied Sanskrit and through it he mastered the theory of music. Although he paid special attention to the Karnataki system of music, he studied the European music as well. At the suggestion of H. H. Maharaja Gaekwar, he wrote several books on instrumental and vocal music. He devised a system which contained the good points of all the different

1. Sangita, the Hindu word for music, includes vocal music, instrumental music, and dancing. However, dancing being considered a very low profession, is not taught in the music schools.

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systems existing in India. Books on music written about a thousand years ago show that there was a system of notation in those times. He could not utilize the same system as the music in India had undergone various changes on account of the foreign influences. The European system could not serve the purpose, as Hindu music had quartertones and several kinds of trills, shakes, and turns which do not exist in the European music. So he set to work and formed his own system of notation. He modeled the characters of the pitch, the bars, and the octaves after the European system of notation, and also brought in the peculiarities of all the existing systems of music in India. His system of music and notation might very well be called the national system of India's music, for it has been accepted by many provinces beside Baroda. His grandson, Professor Inayatkhan R. Pathan of Baroda, is making experiments in a new line. He is trying to introduce harmony in the Hindu music, in the belief that Hindu music combined with harmony will be much appreciated by the Europeans.

Three more schools were subsequently opened at Navsari, Patan, and Amreli. The classes are held from 6 P. M. to 8 P. M., so that school children as well as others can utilize their leisure time in the study of music. There are 1,004 students in these schools.

Music classes were also started in the male training college and the female training college for teachers, and for girls in girls' school No. 1, and Marathi girls' school No. 1 at Baroda, girls' schools Nos. 1 and 2 at Patan, and at Navsari and Amreli. In all 577 girls attended these classes. Every year the number is increasing, and it is apparently becoming a special attraction.

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Sanskrit Schools.

There are eight Sanskrit schools, four established by the State, one under State inspection, and three grant in-aid, the oldest of them having been started in 1876 at Dwarka. The number of pupils is 386. No fees are charged. There is a famous Sanskrit library at Vithal Mandir in Baroda, containing some six thousand volumes, and worth about ten thousand rupees. Every year 426 rupees are spent on this library, and a Shastri works as the librarian. It is a free library and is a great boon to the condidates who come from remote parts of India for the Shravan Mas Dakshina.

A sum of about 18,000 rupees, called the Shravan Mas Dakshina fund, is set apart every year for encouraging the study of the ancient Sanskrit literature. Examinations are held in various branches, and those who appear and pass are given as Dakshina, or kind of prizes, a certain amount in cash annually during their lifetime. People come from all over India, and no caste distinctions are observed, a non-Brahmin being admitted even in the Veda examination. In 1909-10 there were 306 candidates, of whom 221 were successful. The Dakshinas given to these successful candidates amounted to 1,480 rupees. The total amount distributed, both amongst those that passed in previous years and this year, amounted to 18,357 rupees. The subjects settled for the examination were: Vedas, Law, Advaita Philosophy, Shudha Advaita Philosophy, Vishishta Advaita Philosophy, Dvaita Philosophy, Grammar, Logic, Rhetoric, Poetry and Drama, Astrology, Astronomy, Medicine, Mythology, and Kirtan.

Sanskrit is also taught as a voluntary subject in a few of the vernacular schools, and a special teacher is provided in case of necessity.

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[1] It is now amalgamated with the Central library.

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Military Schools.

The name 'Military Schools' is an anomaly. These schools do not give any military training, but they are meant for the military people and their children. There are seven schools in Baroda and two in the Amreli division, one for the Dhari Battalion and one for the Okha Battalion, attended by 531 students.

Jail School.

For the education of the prisoners, a school has been started in the Baroda central jail, which has 16 pupils. The jailer has to send to the school those prisoners that are worth sending, considering their age. The teaching time is to be fixed by the teacher in consultation with the jail superintendent, so that the jailer may send the prisoners at the appointed time to the school, which is situated inside the jail grounds. These pupils are not to be sent away for work with other prisoners, but are employed in some industrial work in the jail or in the garden surrounding the jail. They have to work for eight hours according to the law. The student's work is reduced by two hours. The prisoners who attend school are kept together, so that they may not get any bad habits from the others, If a prisoner is employed as an assistant to the teacher, outside the school hours he has to be careful in doing the duties assigned to him by the jailer, with the permission of the jail superintendent, and he has to make himself thoroughly familiar with the school work. Every month five rupees can be spent by the teacher in buying books on industry, morality, and religion. The prisoners knowing how to read are to be encouraged to read such books during their leisure time. The course is divided into four standards and is easy, for the only subjects taught are reading, writing, arithmetic, and a little geography.

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Schools maintained at the expense of some religious institution, but completely under State control, are called fund schools. There are three such schools in the State, situated at Becharaji, Sankhalpur, and Beyt (Dwarka), with 292 pupils.

Fund School.

Schools started by private enterprises, but receiving monetary help from the State are called grant-in-aid shools. In 1910–11 there were fourteen Gujatati schools with 999 children, three Sanskrit schools with 118 children, two Urdu schools with 286, and three Marathi with 167, making a total of 22 schools and 1,570 pupils.

Grant-in-aid Schools.

The four schools completely independent of the State in money matters, but under the inspection of the educational department, are: (1) The Navajbai Tata Parsi girls' school at Navsari, very well known for its excellent tuition, and Sheth Chunilal Sankalchand Jain girls' school at Pattan, the former exclusively meant for Parsi girls and the latter for Jain girls, having 207 and 125 girls respectively (2) the Sanskrit school at Beyt maintained from the interest of the sum contributed by Sheth Premji Dayal, having 30 boys; and (3) a school maintained by the Thakor of Miyagam, with 117 children. Moreover, some one is sent every year to examine the Ladd Govinddas Anglo-Vernacular school at Madras, as it uses the Gujarati language.

Schools under Inspection.

A boarding house has been opened at Amreli since February 1907, for the purpose of training the sons of Patels and Mukhis, who are the future headmen of the village. It has 16 boys, of whom 11 were sons of Patels and 5 of non-Patels. They are instructed in practical and theoretical agriculture, revenue rules

Patel Boarding Houses.

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and acts, surveying and ordinary education given in the elementary schools, in a two-year course. Since December 1908, a farm has been attached to it for agricultural training. It has about five hundred trees of various kinds, and instruction is given in fruit-culture, horticulture, and gardening. The practical work done on this farm benefits the neighboring farms also. The school has three teachers, the headmaster, who has a diploma in agriculture, a revenue teacher,[1] and a trained elementary teacher. The sons of Patels pay two ruppes and a half, and the non Patels five rupees a month toward their expenses. The expense incurred by the State for this institution was 4,528 rupees in 1909--10.

Orphanages.

Orphanages were started in all districts in famine times. Now there are two, one for boys and another for girls at Amreli, having 62 boys and 39 girls. Five boys and one girl from the Navsari district were admitted into the Dhanka boarding house at Songad. Ten orphan boys were in English Schools for the study of English. All of them are trained in some useful industries to enable them to make their own living in future. They are becoming tailors, carpenters, weavers, stone-masons, bricklayers, shoemakers, dyers, and printers. They belong to various castes, there being Brahmins, Banias (merchant class), Rajputs (military class), Kunbis (farmers), and Dheds (non-touchable class).

The orphan girls that attain a marriageable age are given away in marriage to suitable husbands from their own community. In 1907--8 nine such marriages were celebrated. In 1908--9 there were several marriageable girls, but owing to the want of suitable husbands, they

1. A revenue teacher, teaches the rules which regulate the collection of taxes, import duties, and other government receipts.

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remained unmarried. Eight of them were sent to the female training college boarding house to become teachers.

Bhashanter Store.

The Bhashanter store has all the books, originals or translations published by the State. A number of books are compiled or translated every year, by the State. The state selects the man to whom it pays a certain sum as remuneration for writing or translating a certain book, and then prints it at State expense.[1] In 1908--9 (a) the following books were published:

(1) Translation into Gujarati of an English lecture on business economics by Mr. D. E. Wachta, delivered before the Bombay Graduates' Association.

(b) The following books are in the press:

(1) Nirnaya Sindhu, Part III.

(2) Dan Chandrica.

(3) Translations into Gujarati of Montaigne's Essays.

(4) A monograph on the Patidar community.

(5) Translation into Marathi of the Shankar Bhashya.

(6) Translation into Gujarati of the Ramanuj Bhashya.

(7) Translation into Gujarati of Fiske's History of the United States.

(8) Achara Mayukha.

(c) The following books are finished by the writers, but the manuscripts are being examined, corrected, or prepared for the press:

(1) Constitutional History of England by Montague

(2) Duties and Rights of a Citizen.

1. Baroda State Report of Public Instruction. p. 60.

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(3) School Management.

(4) Report on social and moral conditions of children in schools and of those outside.

(5) The Balance of Power.

(6) History of Modern Europe.

(d) The following books are under preparation:

(1) Vayu Puran.

(2) Prayaschitta Mayukha.

(3) Translation into Gujarati of the Classic Myths in English literature by Gayley.

(4) Medieval and Modern Europe by Myers.

(5) Translation into Marathi of Seebohm's Era of the Protestant Revolution.

(6) A Book on Religious Education for the teachers.

(7) A Book on Religious Education for Children.

A sum of three thousand rupees is granted for giving encouragement to authors. The manuscripts or books sent by authors are examined by the Book-Committee, who give their opinion. Patronage is given to Vernacular books, a certain number of copies being purchased and distributed in public schools and libraries.

CHAPTER XIII.

DESIRABLE MODIFICATIONS IN CURRICULUM AND METHOD.

Education is the 'reconstruction of experience, giving it a more socialized value.' What shall be the starting point for this kind of education? Shall it be the remote past, the present, or the future? A child does not know anything of the past, he does not care to

Relation of the Child to the Curriculum.

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know anything of the future. He is self-interested. He looks to what is before him and is interested in what he sees and does every day. Therefore, in education the child must be 'the starting point, the centre and the end.' He has not to fit the curriculum, but the curriculum is to be made to fit him. The child is not logical, and therefore the curriculum is not to be logical, but psychological. The motive, the interests, and the development of the curriculum must be in harmony with the motives, the interests, and the development of the child. The child and the curriculum have to go together. "Just as two points define a straight line, so the present standpoint of the child and the facts and truths of studies define instruction. It is continuous reconstruction, moving from the child's present experience out into that represented by the organized bodies of truth that we call studies."[1] The kindergarten has been established in order to give full scope to the child's activities. The subject matter in it should be anything that is familiar to the children, things that they every day see and play with, so that they may not find the school quite different from the world outside. In India the majority of the children do not like to go to school, owing to the lack of sympathy of the teachers, and the formal nature of the curriculum. Hence, in fixing the curriculum, more emphasis should not be laid on the intellectual or ethical principles, but on how much an average child can do within the time allotted, making the curriculum as elastic as possible.

Who should fix the curriculum?

Who fixes the curriculum? It is a very important problem. Have those who are continuously in contact with children, and who have been watching their development and progress from day to day, and who know their capacities and needs-have they any voice in

1. Dewey, John. The School and the Child. p. 26.

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fixing the curriculum? In this matter the teachers should be consulted more than the officers. The curriculum is not to be made an ideal one, but a workable one-one whose contents can be well digested by the child.

In the Secondary School.

The secondary schools are nothing but preparatory schools for the University entrance examinations, and the University is practically the dictator of the high school curriculum. In 1908-9 at Baroda there were 1300 pupils in the seven standards of the Anglo-vernacular school and the high school. About 200 of them were in the seventh standard, of whom 99 were sent for the University entrance examination. Only 50 of them were successful. Some of the successful candidates leave their studies altogether. In case forty of them enter the college the remaining 160 from that class might take up one or the other life profession. The school curriculum is made for those forty only and not for the others. With few changes in the existing curriculum, a better education useful to the majority can be given, and at the same time, the purpose of preparing the pupils for the University entrance examination might be served.

Length of Periods.

The length of the periods should not exceed forty minutes in the first two years, and fifty minutes in the others. At the end of each period a rest of ten minutes would be ever healthy.

Study Periods.

The curriculum does not provide for study periods. The conditions of all homes are not good. In some the surroundings are such that the pupils find it hard to study at home. For sake of the students, the schools should provide some study periods before or after school hours, under the supervision of some teachers, who may show their young charges how to study and help them if necessary.

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In the kindergarten the formal teaching should be replaced by psychologic methods. Mr. E. A. Kilpatrick, in his article on the Psychologic Basis of the Kindergarten, comes to the conclusion that, "1. Ideals of education and theories and practices of education are to be judged on a different basis.

Kindergarten.

"2. Froebel's ideas were good; his theories based on his psychology and his ideas of the laws of development are a mixture of truth and error, and the kindergarten practice based on them is a mixture of good and bad.

"3. The kindergarten program should be changed radically, in accordance with the latest truths of child-development and the results of such change carefully observed, tested and compared with the results of typical kindergarten practice that the good and bad of each may be determined and the best of each selected." [1]

Drill in elementary operations with abstract numbers is given too much prominence in teaching arithmetic. Long fractions and problems that have no bearing on practical life should be avoided. Algebra and geometry which are begun in the fourth year of the secondary school, might with advantage be given from the first or the second year. Algebra being easier than arithmetic in many respects might form a part of the elementary curriculum. Geometry can be taken up in connection with drawing; and arithmetic, algebra, and geometry should be correlated.

In literature, instead of reading one text-book, it is always better to make students read a number of books. It would not matter if they do not know the meaning of each and every word; but if they catch the sense sufficiently well the purpose would be served. The students themselves

Language Study.

[1] National Society for Scientific Study of Education. Sixth Yearbook. Part II p. 31.

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would be more interested in reading a nnmber of different books. What the teacher can do is to bring before them interesting and fine passages which would make them appreciate literature. It is said that grammer is needed for correct speech and correct writing. This idea, however, is not as applicable to the mother tongue as it is to a foreign language. Mr. F. S. Hoyt, in discussing the place of grammar in the elementary curriculum, recommends that "grammer should not be taught as a separate subject in the elementary grades, at least below the eighth year. And that only such grammatical facts and principles be taught in these grades as have a direct bearing upon the use of language for expressing and interpreting thaught. Such grammatical instruction should be incidental to the practical study of language, and should evolve from it. During the last year of the elementary caurse, pupils should systematically review and organize the knowledge of grammar thus incidentally obtained so that it may be permanently retained in convenient form for use, and as a foundation for any future linguistic study." [1]

One can never learn to speak a language by memorizing a number of words, forms, and rules of grammar. First of all the nature of the sounds must be made clear to the children for correct pronunciation, and they must be made to speak not words but connected sentences from the very start. Pupils must not be given any textbook for some time, instruction being only oral. During the periods when the foreign language is taught, the use of the vernacular should be avoided as far as possible. The knowledge of writing should be given later on. That is the natural way. A child begins to speak his own mother-tongue before he even dreams of writing it. Grammar as grammar may be introduced very late. This would need the most expert teacher to begin the

1 Teachers College Record, November 1906, p. 26.

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the work, but the results will be astounding. The speaking knowledge of the language will be gained in a comparatively short time.

English has been started as a foreign language in some places. It can be made a subject of the last two years of the elementary curriculum all over the state. Although it is the common language for well educated people, it will never become the language of the masses. Hindi can very well be the "lingua franca" of India, as it can be easily understood and studied by all. This language should therefore be introduced in all the secondary schools, and even in the elementary schools as well.

History and Civics.

History is to be taught in order to show how the people progress in different countries, to profit by their experience and to see their merits and faults, so that the rising generation may not commit similar mistakes. Civic instruction can no longer be neglected. One ought to know how to become a good citizen, his duties to his city and his state. This may be imparted directly through specific instruction, and indirectly through organization of self-government in school.

Geography.

In geography the climatic conditions, animal and vegetable life, and industries should draw more attention. One should know the business centres, the causes of their importance, the development of the industries there, and hundreds of other things connected with practical life in those communities. Geography is the study of the earth in its relation to man. It shows how environment affects mankind, and how different races are formed, how the climatic conditions change human nature, and what relation customs, manners, and industrial and political institutions have to the geographical environment. That

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is what a teacher has to know and teach. More attention should be paid to the geography of India, for as Goethe writes: "He who knows not his own country has no standard by which to know foreign lands." Excursions are one of the most effective and interesting ways of teaching home and neighborhood. And instead of the text-book of geography, which is only a collection of names, map-books, or atlases should be used by the pupils.

Science.

The theoretical method in teaching sciences should be replaced by the laboratory method. The pupils should be given a few instructions and then allowed to perform their own experiments and note the results. It is no use teaching the names of different shapes and sizes of roots, stems, leaves, flowers, fruits, seeds, and plants, if no reference is made to the soil, the country, the mode of growth, and the uses. Similarly in chemistry and physics, reference should be made to materials of everyday use. These subjects can be introduced in the elementary school as biological and physical nature study. Gardening can be utilized as part of agricultural nature study. Nature study should be observational, materials being common things touching everyday life. School gardening and and agriculture introduced in the village schools where most of the population is agricultural, will not only make the child respect honest labor, but will also please the parents, as it will make the child sympathetic with and take interest in his father's profession. Some knowledge of physiology further developed if possible into sex education would also be very useful.

Music.

Music, which was once considered the best accomplishment, has not been thought of as such by respectable people since a very long time. It holds a low position, and is the property of a few professionals. Schools can very well

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use this subject, and raise it from its low level, for it is a subject which gives relief and joy to even the miserable and the afflicted, and which makes the home a real sweet home--a veritable paradise on earth. Music should be commenced from the very beginning, and every pupil that goes through the elementary school must know the notation. Music is of great assistance in physical training as it gives the pupils the idea of rhythm and time.

Physical training does not need any words in its support. It must be made compulsory for every one.

Vocational education is required by the people of India. They are to-day in a state of poverty. They have lost most of their old arts and industries. Some think that all of them can be revived. However, in these times of keen competition and machinery, it is impossible to get hold of all of them. But some of these can be revived. A few can be introduced into the schools with manual training. The ineffectiveness of the Sloyd system is beyond discussion now. Manual training does not consist in teaching pupils how to make a few patterns; it is meant to acquaint the pupils with forms, tools and their uses, and to introduce them to some of the useful industries. It would be specially interesting to pupils if the history of industries be given. Their relation and interdependence upon human life would show the children their importance. Drawing, painting, nature-study, history, geography, and manual training can all be combined and used in the study of arts and industries in elementary as well as secondary schools. Ex-president Roosevelt, in his speech at Luxor, Egypt, said:

Vocational Education.

"I am pleased to notice in your curriculum that you are teaching not only academic subjects, but housewifery, cooking, etc. You are avoiding an error into which

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Occidental civilization is the likeliest to fall. There is too much belief that education is purely a matter of books. I have met people with an excellent literary training whom I regarded as wholly uneducated in the essentials of life, and on the other hand I have met men thoroughly versed in these essentials, who were shaky in their spelling.

"Education must be practical. Book knowledge is not all you women must learn. Learn to cook and to keep house, but at the same time you must have literary knowledge. Training your mind will enable you to take your proper places as counsellors of families. I want to see education.....directed to making man able to care for himself and for those dependent upon him. I want to see your colleges turn out men not merely fitted to take government jobs, but who are good farmers and mechanics. Education must be a step not away from the farm but in the direction of the farm. The prosperity of every country will be reduced unless the essentials rest upon agriculture."

This is true everywhere. In India, too, agricultural training can be profitably given in the rural secondary schools, while the city schools can take up other important industries.

Elective System.

The elective system[1] has its own advantages and disadvantages. If proper care is taken by the teachers and parents in advising the pupil, the disadvantages would be set aside. The greatest advantage is that when the pupil selects a particular subject, he is responsible for it. He is generally interested in it, and the responsibility being upon

1. It is a system according to which a pupil can choose some subjects of his own liking from a number of them. It is found to some extent in the Colleges of India under the name of voluntary or optional groups.

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him, he pays the required attention to it. In a six-year high school course electives may be introduced from the third year. An experience of two years would make the teachers know what the pupil is fit for.

For the first two years, English, vernacular, classical language, mathematics, history, geography, biology, manual training, physical training, music, and drawing would form a good curriculum. A few hours' work every year for many years is better than many hours' work for a few years. In the third year, English, vernacular, history, geography, physical training, and physiology; in the fourth year, English, vernacular, history, geography, and physical training; in the fifth and the sixth year, English, vernacular, and physical training can be kept as compulsory subjects; and for the remaining periods a number of electives can be given, viz: *Hindi, Persian, Sanskrit, French, German, mathematics, biology,* hygiene, physics, chemistry, astronomy, geology, manual training, drawing, painting, music, business-arithmetic, commercial geography, etc. etc.

The main problem, then, is how should the knowledge of the subjects of the curriculum be imparted to the pupils? It is a well known fact that every one, and especially children, take much interest in things connected with every day work and life. The instruction imparted through the life problems would be of the greatest use, and the nature of the knowledge gained by them will be very practical and useful in their life work. The pupil is not to be subordinated to the subject matter, but the subject matter should be so adjusted as to be subordinated to the pupil. A good teacher should heed all these things.

Old Belief.

It has been believed for a long time, and is yet believed in many places, that the teacher who could talk the most to his pupils, who could make them memorize facts required

in their daily lessons, who could keep such a so-called nice discipline in the class that not a single pupil would utter even a word but the answers to the questions put, and who could keep everything calm and quiet, with the pupils sitting like dolls, without manifestation of any activity, is the best teacher.

Child Nature.

These ideas can no longer be held. The very nature of a child is activity and freedom. Children want to find out things for themselves, and form their own conclusions from their own experiences which may be useful for their future career.

Individuality and Initiative.

The most important thing to be observed in ideally good instruction is the opportunity given to the pupils to assert their individuality. The artificial discipline of parents and teachers cows down their active spirits and they are made to believe in what is said to them, at the expense of their investigating nature. This is a suicidal policy. It would not be surprising if the children that form the habit of following others and not thinking independently for themselves, behave as slaves when they grow up. Good education consists in giving great scope to their individuality. The teacher should keep himself always in the background, simply acting as a guide, or as a chairman of a debating club. All the proceedings of the class should be carried on by the pupils themselves. They should be made to put questions, answer them, argue for and against certain propositions, and should be made to become the active working members–the soul of the class throughout.

When the whole thing is to depend upon the activity of the children, it is necessary that they should know

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Need of Specific Aim.

the specific aim of the instruction. Otherwise there would be no definiteness. They would not know what their goal was, and they would be doing their work in a haphazard manner, without any direct interest in the work. What is done without any aim cannot be done heartily. Without any central pivot, the ideas coming at random would be of no avail as they would not be associated with any specific purpose or aim. When the children know the aim, they should be made to collect as many facts as possible from their past experiences and readings for its support. In a restaurant or lunch room even the adults appear pleased when they are to choose the items of food from a great variety. If there are very few things, even though they may be the best, one does not feel much pleasure as no choice is left. A thought can be rendered rich and pleasing when a variety of facts are ready for use to supplement it. The materials gathered together like this would not be of use if they were left in an irregular mass, and thought to be of equal worth. Many times they have opposing views from different parties, or certain facts or statements come to them from so-called authorities. The position is very delicate at such a time, and it mostly depends upon the instructor to impress upon them the idea that such statements are not to be taken as true because they emanate from authorities or are found in printed books, but that they are to exercise their own judgment and assign relative values to them. The responsibility of passing judgment must be placed upon the pupils in all school work. Thus they must be made to rely upon their own efforts and not accept blindly what others say.

When the materials are collected, and when the pupils

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are able to find their relative values, they should be made to put them in order, or organize them. They should be grouped according to their different values. Remembering why the materials are accumulated, they should be arranged around the central idea according to their values in relation to it. Then relatively unimportant facts can be eliminated. It is the duty of every good instructor to develop in the pupils the habit of neglecting worthless facts, and arranging in proper sequence the useful ones.

Organization of Ideas.

After all this is done, it is not very hard to remember these useful facts. Memory plays a very important part in life. It is the memory without thought or understanding, or what is commonly called "cramming" that is to be deplored. When facts are well compared, and are closely associated among themselves and with others, they are naturally stamped in such a way upon the mind that one is not required to make any extra effort for memorizing. The encouragement given to co-operative work would greatly help in this field, because this would lead them to make comparisons of their thoughts or products, and would give them sufficient motive and interest to discuss the matter and think out the useful facts.

Memorizing.

Generally the school instruction makes them only collect facts and go no further. However, good instruction consists in not only gathering facts, arranging them according to their values and finding out the most valuable ideas, but also in making these ideas one's own—in using them—in putting them into practice.[1] This can very well be

Using of Ideas.

1. Shri Harsha in his work called Naishadha says: "Knowledge has to go through four stages, viz, Study, understanding the ideas of the Study, using the ideas of Study, and spreading these ideas widely."

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done in every day school and home life. It is necessary for this to have the school and the home co-operate, and also to make the school more homelike. The school-even the class-is a small society, and pupils can very well make use of their ideas in this society if they are given the incentive and freedom which is required of every good teacher. Things should be so devised that these ideas can be formed into habits, so that they can come forth automatically without any loss of time in future use.

Tentative Attitude.

After all this, however, there is a great danger that the pupils will look toward the ideas of others, if they be not in conformity with theirs, without any sympathy whatever. The tact of good teaching lies in not letting that dogmatic spirit enter into them. They should be made to realize how the world has progressed during the last two centuries, owing to its tentative attitude toward new facts and new theories. In the past the man who expressed new ideas was menaced and persecuted by the people. Now the situation is altogether changed. Every one tries to look at the theories of others with sympathy, and tries to find out whatever particle of truth or possibility there may be in them. It is thus that the new ideas are soon taken up, and civilization rapidly progresses. The pupil must then be instructed in such a way as to see things with an unprejudiced mind.

In such a class one can very well say that the instruction must have been ideally good.

All say that the present generation of India lack originality. It is true to some extent. What is the cause? Their originality-independence of thought is suppressed, crushed from their very childhood in the schools; and unless the methods of instruction are completely changed there is no hope of regaining it.

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CHAPTER XIV.
LIBRARIES AND MUSEUMS.

Libraries.

For the intellectual and moral welfare of a people, nothing equals the rapid movement of modern times in opening libraries. There are many good collections both among individuals and the various institutions of the state ; but they are not accessible to everybody. The public libraries supply this deficiency, with the ultimate aim of spreading knowledge among the masses. There are about forty-five public libraries in the Baroda state. Instigated by the ideas of public good, H. H. the Maharaja Saheb was pleased to give a sum of 30,000 rupees to open circulating libraries and reading rooms in villages were no such facilities existed. The following scheme was formulated :

"(a) That Government should countribute as much as the people would collect, but never exceeding twenty-four rupees every year, for the purchase of newspapers, journals, and periodicals.

"(b) That Government should supply to these institutions a set of books on literature, art, and science, etc., of the value of one hundred rupees, provided the people collect and forwrd to the Vidyadhikari a subscription up to one hundred rupees, and

"(c) That the libraries should remain the property of the public so long as they are maintained in a state of efficiency. If circumstances required the libraries to be closed, the books, etc. should be come state property under direct control of the head master of the local vernacular school.

"This was not all. It was also ordered that these new libraries should be supplied with such books as the Bhashantar store could spare. Under this special concession it has been roughly estimated that each of these libraries secures for itself books worth about one hundred and twenty-five rupees or more." [1] The local boards also

1 Report of Public Instruction in the Baroda State for the year 1908-9, pp. 56-57.

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take an interest in these libraries and spend about 3,000 rupees a year for supplying newspapers for these libraries. In 1909-10 there were *232* such libraries.

School libraries.

All the schools are likewise provided with small libraries, but these school libraries are for the exclusive use of the teacher. The teachers are held responsible for the safety of the books, and so no books are issued to elementary school pupils.

Suggestions.

Inasmuch as the organization of the modern school demands that children be treated collectively rather than individually, the question of developing the individual talent is likely to be overlooked. Why should it not be a function of the library to remove this drawback as far as possible? It is advisable to keep only class room libraries, containing text-books and books on the subject of pedagogy in the school, and keep the other volumes in the town or village library, where the head master of the school is in charge and where the teachers and children have a right to use the books. These libraries can maintain a separate juvenile department, where books useful and fit for children can be kept. The teachers can recommend certain books as extra reading, and the pupils use them from the iibraries, or the teacher ean borrow a number of books from the library and circulate them among the children, thus creating in them a love for reading. But care should be taken by the teachers not to hold the children to too strict an account for what they read, otherwise they would be overworked. The reading of extra books creates a greater interest in children, as they always like to get away from the mechanical routine of text-books. The libraries should also supply a number of copies of certain popular books, to make it possible for several children to read the same book at the same time,

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and profit by a free exchange of ideas, as to what they think about those books or what they find to be the best or most profitable to them all. Such a use of the liberaries for school purposes, results not only in the improvement of the school work, but also in giving the pupils a familiarity with the use of books, and in cultivating habits of investigation which are likely to make them continue their studies even after the end of their school life. [1]

Museums.

There is a fine museum at Baroda, which is visited by several people every day. It has a special educational section. The students of natural sciences in the Baroda college take the greatest advantage of it. Boys from vernacular schools visit the museum accompanied by their teachers who explain to them the nature of various exhibits. Students from the male training college also visit with their teachers in order to study astronomy, electricity and magnetism. Kindergarten materials, charts, and diagrams for the use of teachers and students are purchased freely.

The English schools have no museums attached to them. They have no facilities, and none of them shows a tendency to ask for materials to illustrate and explain the lessons. Every vernacular school possesses a large or a small museum according to the zeal of the head master. In 1885 His Higness the Maharaja Saheb ordered: "If the suggestion could be acted upon of a museum to be attached to principal schools in each district, where the curiosities and the peculiar products of the country could be preserved, it would be well

1 Under Mr. W. A. Borden, libraries are being organized according to the new American ideas. The palace library is converted into the Central library with a large Reading room. A library class is also opened which contains 11 students, one of them being an M. A., 3 B. As, 4 under-graduates and 3 ladies, of whom one has passed the matriculation examination.

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worth some outlay."[1] Accordingly the department ordered the school masters to have museums in their schools. Officers that visit the schools often make suggestions for collecting better articles and for general improvement. Several times the State has also given special grants for charts, maps, books and other articles of educational value. Twenty different schools in the State were provided with objects, charts, pictures and other materials needed in class teaching in 1897-8 at an expense of 1,750 rupees, according to the recommendations of the Educational Committee. Every taluka school[2] now possesses a fair collection of specimens, models, diagrams, etc. for use as practical illustrations. The new reading series contains a number of science lessons which cannot be explained without scientific apparatus. For this purpose the state spent 5,000 rupees in 1907–8 and 5,000 more in 1908–9. Looking to the modern edecational improvements every taluka school needs a magic lantern and a number of slides on history, geography, physiography, astronomy, and other subjects. Very interesting and impressive moral lessons can also be given with the help of the magic lantern.

A pnblic museum like the one at Baroda can be made the greatest educative centre. Many more articles of purely educational use can be collected. Stereopticon pictures and lantern slides of almost all kinds and description available, can be brought together and loaned to different schools at different times. The can organize some illustrated lectures on various topics which would impart geod general

Suggestions.

1 Modi, C. T., Report on public instruction in the Kadi District, Baroda State, p. 29.

2 A taluka is a small political division. The state officers for the taluka reside in the chief town of the taluka. The principal school in such a town is called the taluka school. The head of such a school supervises the other schools.

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information to the public. It should have men who would go around with parties and explain and show to them all materials of interest without any expectation of gratuity. Its responsibilities do not stop with what can be done inside the museum building, but it must be ready to send its materials outside whenever wanted by schools or other educational institutions, and bring them back as soon as their use is over. The museum authorities should not be reluctant to send their articles outside.

In writing upon the museum in an ideal school, Dewey says: "In an ideal school there would be something of this sort: first, a complete industrial museum, giving samples of materials in various stages of manufacture, and the implements, from the simplest to the most complex, used in dealing with them; then collection of photographs and pictures illustrating the landscapes and the scenes from which the materials came, their native homes, and their places of manufacture. Such a collection would be a vivid and continual lesson in the synthesis of art, science and industry. There would be, also, samples of the more perfect forms of textile work, as Italian, French, Japanese and Oriental. There would be objects illustrating motives of design and decoration which have entered into production. Literature would contribute its part in its idealized representation of the world-industries, as the Penelope in the Odyssey-a classic in literature only because the character is an adequate embodiment of a certain industrial phase of social life. So from Homer down to the present times, there is a continuous procession of related facts which have been translated into terms of art. Music lends its share, from the Scotch song at the wheel to the spinning song of Marguerita, or of Wagner's Senta. The shop becomes a pictured museum, appealing to the eye. It would have not only materials, beautiful woods and

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designs, but would give a synopsis of the historica evolution of architecture in its drawings and pictures." [1] These ideas might well be adapted to India's life and activities.

CHAPTER XV

PROBLEMS.

The following are some of the most important problems in the education of the Baroda State:—

I. One is allowed to enter the secondary school when he finishes the fourth standard of the elementary school, and one who has successfully gone through the fourth standard of the secondary school, is considered to have completed the elementary school course. There is an over-lapping of from three to four years.. Many pupils waste much of their time by first going through the entire elementary course, and then beginning the secondary. To remove these defects both the courses need to be reconstructed. Although it is not within the province of this paper to outline a new course of study, yet some suggestions may be offered on the feasibility of such a plan. The first year might be used in purely kindergarten work, the second in a combination of kindergarten and elementary, and the six years in purely elementary English-being offered in the last two years, and Hindi during the last year. The succeeding six years might be set apart for secondary education, concluding with the necessary vocational courses. The elementary education is the foundation, while the secondary education provides the particular needs. The responsibility of a civilized state is not discharged when it has furnished the elementary education.

Reconstruction of Elementary Secondary Education.

1 Dewey, John, The School and Society, pp. 105-106.

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II. Is it advisable to have separate idustrial schools, or to introduce vocational courses in the ordinary schools?

Vocational Education.

Providing separate industrial schools would strengthen the existing caste aristocracy. If vocational education be introduced in the ordinary schools, that spirit of aristocracy might break down, people might become more democratic, and a respect for honest labor might be engendered. Professions and occupations of the parents of children attending the school in 19 10–11 were."

	Government or private servants	Jamindars or cultivators	Teachers	Traders or shopkeepers	Petty trader
No.	13,560	89,074	1,505	18,455	1,200
p. c.	7·6	49·9	·8	10·3	·7

	Artisans	Priests	Others	Without employment	Total.
No.	15,815	2,635	31,268	5,006	1,78,571
p. c.	8·9	1·5	17·5	2·8	100

This table shows that 50 per cent. of the children are farmers by profession; so agriculture schould be one of the subjects in the curriculum of every school. Also, owing to a great percentage of artisans and traders, industrial and commercial courses need to be introduced. The courses offered at the present time do not provide for any idustrial education, but they are specially useful to the children who prepare themselves for clerical work. The children of the government and private servants, who are expected to do this, constitute only 7-6 per cent. of the whole.

II. The children should not be tried in ordinary courts. They should be tried by judges who are very sympathetic towards them, and who know child psychology. Instead of sending the criminal children to ordinary prisons, reformatories should be provided for them, where they can learn some industry while serving their time. Probation officers should be appointed to look after them when they are freed.

Juvenile Courts and Reformatories.

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IV. The State should fix the limit for the working hours of the children. If the working children have not received satisfactory education, their employers should be forced to relieve them certain hours a week for more education.

Working Hours for Children.

V. One who is not able to support himself is a burden to society, and hence to the state at large. The state is supported by the taxes paid by the people. These tax-payers should be made very efficient workmen, to increase the income and better the prospects of the state. Even the blind, the deaf, and the crippled ought to be educated. Their education should be of a vocational nature, which may help them as far as possible to become self-supporting.[2]

Defective Children.[1]

VI. Religious and moral training is a problem attracting the minds of educated people all over the world, and is one of the hardest to solve. Some years ago in Baroda a moral text-book, and Bhagavadgita, a sacred text containing the teachings of Lord Krishna, were in regular use. The results did not appear to be very encouraging. The text was always committed to memory, and it carried no more meaning to the child than it would to a parrot. If moral instruction is made compulsory in some formal way, the child looks upon it with as much disgust as he does upon many of the subject that are not offered to him in an interesting form. It becomes a mechanical subject. Morality

Religious and Moral Education.

1. A private deaf and dumb school has been started by Mr. P. R. Nandurbarkar. It has seven boys and two girls. The government has given it a help of 860 rupees up till now. It needs a more liberal patronage.

2. A Children's Court Bill has been passed by the legislative Council and it has been accepted that to employ children below 12 is penal.

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is not something to be memorized. It is an aggregate of principles to be thoroughly understood, preached and formed into habits. The teacher shares with the parents the responsibility of developing this side of the child's character. It depends upon how, and not upon what. It depends upon the school room methods, the administration of the school, and the department, and especially upon the personality and character of the teacher. Shall the moral principles which are to be impressed upon the child, differ from the moral principles of outside life? Shall the moral code of the school differ from the moral code of society? If it does, there would be a conflict in the child's mind about the validity of one or the other, and there is every possibility of his losing respect for the school. Either in teaching through a text-book or in inspiring and exacting moral behavior through school methods, we have to depend upon the teacher. To impart religious education that may suit all religions, and all their denominations, is not an easy matter.

VII. There are selected text-books, generally one for every subject. Pupils and teachers follow them very faithfully. The text-book idea may be good for the proper guidance of the elementary school children, but it encourage cramming if the teachers are not very careful. Some of the books may not fit the city as well as the country life. It it the duty of the teacher to adapt them according to his needs. It is highly desirable for the secondary schools to have many recommended books, so as to fit differens conditions and environments. It is advisable that all the pupils in the class use the same text-book, but have different books for supplementary reading. It would create an active atmosphere in a class, to have different pupils read different books and present the topic under

Text-books.

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discussion from different viewpoints. Supplying free text-books would make it possible to have a greater variety, and would also train the pupils to take good care of public property.

VIII. Elimination of subject matter is one of the most important points that should be taken into consideration by those who fix the curriculum. There are so many things in our subject matter that can, without difficulty, be eliminated, and be replaced by something better. In arithmetic, for instance, we make the pupils master all sorts of tables—tables that are not in use at all-or that the child may never find an opportunity to use, and give him problems which have practically no connection with the demands of ordinary life. Mechanical drill on numbers without any thought side to it, is also a waste of time and energy. Such elimination might be made in almost all the subjects, resulting in the diminution of the burden-some task of memorizing, and in an increase of the more useful and interesting matter.

Elimination of Subject matter.

IX. People in India do not like co-education. Generally the objections come from the higher classes. The masses have scarcely any very great restrictions in the mixing of the two sexes. This question often arises and the state is required to undergo additional expense to please some people. What are its merits and demerits? Richter says, "To insure modesty I would advise the education of the sexes together; for two boys will preserve twelve girls or two girls twelve boys, pure amidst coarse jokes and suggestions merely by that instinctive sense which is the source of natural modesty. But I will guarantee nothing in a school where girls are alone together, and still less

Co-education.

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where boys are." [1] If some little trouble arises, the people are sure to make a great fuss. But they do not see how many similar or even worse troubles arise among those who never go to the school. Through their contact in the school the manners of both boys and girls improve. More-over, by interrelation between the sexes, the unnatural tension which leads to immorality, and the romantic ideas about different sexes, disappear. Tne benefits of the system are: " (1) vast economy of expenditure, (2) a return to natural system, (3) discipline made easier, (4) intellectual stimulus, (5) a better balance in instruction, (6) improved manners, (7) the prevention of extremes either of masculinity or femininity, (8) a safeguard against moral danger." [2] The difficulties are: (1) forcing upon the girl the studies suited for boys, (2) girls might overexert themselves on account of the competition with the boys, (3) feminization of the program owing to the women teachers and girl students, (4) the belief that co-education interferes with the realization of the highest social possibilities through the separation and segregation during the sensitive adolescent period which makes boys more manly and girls more womanly. [3] It would seem to be advisable to have co-education during the elementary school period and separate the sexes during the transition period when they are acquiring the sensitive adolescence, and bring them together again in the university education when they are mature.

English language.

X. The last but the foremost problem is, to what extent should the English language be used in our secondary schools? In the first three standards the instruction is carried on mostly in the vernacular, and English is taught through the vernacular by the translation method. Further on all the subjects are taught in the English language, with necessary explanations and translations.

1. Salder, M. E. Special Reports on Educational Subjects, Vol 11, Part 2, p. 87.

2 Sadler, M. E. Special Reports on Education Subjects, Vol. 11, Part 2, p. 98.

3 Dutton, S. T. and Snedden, D. Administration of Public Education in the U. S. p. 370.

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Lord Macaulay was the first who wrote strongly in favor of imparting education in the English language. He landed at Madras in June 1834, and reached Calcutta in October. He wrote his memorable Minute to the proceedings of the Committee of 1835, on February 2nd, after a few months' experience in the country In that Minute he denounced the Hindu literature and science, and showed supreme contempt for everything Indian. Some assert that his object was to undermine the social and religious institutions of India. The usefulness of the English language to the Indians cannot be denied. The Modern Review of Calcutta writes in May 1909:

"Why should India draw her inspiration from English classics? It is indeed more probable that in a hundred years Europe will draw a new inspiration from Sanskrit classics. If Indians should draw their inspiration from English classics (as remote from the Indian ideal as Chinese classics from English) it will not mean that any Indians will be able to produce an English classic-only that the possibility of producing Indian classics has been destroyed.....The only true way in which England can help India is by helping her to realize the ideals of her own great civilization, expressed and implicit in her religion, literature and art."

The very action of exclusive vernacular instruction in elementary schools shows that English is not intended to be the universal language of the people of India. It was taken up for the introduction of sciences. But practically no science is taught in the secondary schools even yet. Then why should not the various native languages be well cultivated, and scientific works be translated, so that as the people advance original works can be written in the vernaculars?

English can be taught as a foreign language, as French and German are in English and American schools; though

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as it is more useful to the people of India, more attention may be paid to it, and it may be made compulsory. In spite of the present system, one would find that more than fifty per cent. of the university graduates are able neither to speak nor to write the English language well.

Lord Curzon while speaking at the Education Conference at Simla, said, "Primary education, by which I understand the teaching of the masses in the vernaculars, opens a wider and more contested field of study. I am one of those who think that Government has not fulfilled its duty in this respect. Ever since the cold breath of Macaulay's rhetoric passed over the field of the Indian languages and Indian text-books, the elementary instruction of the people in their own tongues has shrivelled and pined. This, I think, has been a mistake; and I say so for two principal reasons. In the first place, the vernaculars are the living languages of this great continent. English is the vehicle of learning and of advancement to the small minority. But for the vast bulk it is a foreign tongue, which they do not speak and rarely hear. What is the greatest danger in India? What is the source of suspicion, superstition, outbreaks, crimes,-yes, and also of much of the agrarian discontent and suffering among the masses? It is ignorance; and what is the only antidote to ignorance? Knowledge. In proportion as we teach the masses so we shall make their lot happier, and in proportion as they are happier so they will become more useful members of the body politic."

In addition to the development of the vernaculars,[1] India wants a common speech and a common script. The Hindi[2] language and the Devnagari script might take up this duty, if it be not possible for English to do so.

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1 A Vernacular College with a three year course, where all the instruction is imported through the mother tongue, has been very recently opened, though there is an absence of secondary education, through the medium of the vernaculars.

2 Hindi has been introduced in most o institutions of the state.

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Baroda is proud to possess a very enlightened ruler o world-wide fame in His Highness the Maharaja Sayajira. Gaekwar. He has given a new life to the state by providing compulsory education. He has been raising the ignorant masses from darkness to light. 'Forward' and not 'back' has been his watchword. The effects of his works are far-reaching. He has not only regenerated Baroda, but he has made a positive contribution to the welfare of the Indian nation by advocating universal education.

India is a vast country with a tremendous population. It is under-going educational, industrial, commercial, social, moral, and religious changes, through the Western influences. It is regaining a national consciousness and a national life. It may some day be the privilege of England to revivify an ancient nation through universal education, and to put her on a par with the other civilized nations, under the parental protection of the British crown, and to receive in return the heartfelt obligations, and confidence of three hundred million people.

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APPENDIX A.

MEGASTHENE'S ACCOUNT OF ADMINISTRATION OF A HINDU KINGDOM IN THE FOURTH CENTURY BEFORE CHRIST. [1]

Those who have charge of the city are divided into six bodies of five each. The members of the first look after everything relating to industrial arts. Those of the second attend to the entertainment of foreigners. To these they assign lodgings, and they keep watch over their modes of life by means of those persons whom they give to them for assistants. They escort them on the way when they leave the country, or in the event of their dying, forward their property to their relatives. They take care of them when they are sick, and if they die, bury them. The third body consists of those who inquire how and when births and deaths occur, with the view not only of levying a tax, but also in order that births and deaths among both high and low may not escape the cognizance of the government. The fourth class superintends trade and commerce. Its members have charge of weights and measures, and see that the products in their season are sold by public notice. No one is allowed to deal in more than one kind of commodity unless he pays a double tax. The fifth class supervises manufactured articles, which are sold by public notice. What is new is sold separately from what is old, and there is a fine for mixing the two together.

1 McCrindle, J. W. Ancient India as Described by Megasthenes and Arrian. pp. 86–88

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The sixth and last class consists of those who collect the tenths of the prices of the articles sold."

The military officers "also consist of six divisions with five members to each. One division is appointed to co-operate with the admiral of the fleet; the second with the superintendent of the bullock trains which are used for transporting engines of war, food for the soldiers, provender for the cattle, and other military requisites. The third has charge of the foot-soldiers, the fourth of the horses, and the fifth of the war-chariots, the sixth of the elephants."

A third class of officers superintends agriculture, irrigation, forests, and generally the work of administration in rural tracts. "Some superintend the rivers, measure the land, and inspect the sluices by which water is let out from the main canals into their branches, so that every one may have an equal supply of it. The same officers have charge also of huntsmen, and are entrusted with the power of rewarding or punishing them according to their desserts: they collect the taxes and superintend the occupation connected with land, as those of the woodcutters, the carpenters, the blacksmiths, and the miners. They construct roads, and at every ten stadia set up a pillar to show the byroads and distances."

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Number of Pupils in different Standards of Vernacular Schools.[1]

	Special Insts.	Fund Schools.	Schools under Inspt'n.	Aided Schools.	State Village Schools.	Other state elementary Schools.	Total.
No. Schools...	12	3	3	30	1,563	1,192	2,816
No. pupils special studies	2,095	...	32	179	...	...	2,891
No. pupils 7th Stand. ...	...	...	16	...	10	97	113
No. pupils 6th Stand. ...	...	17	15	81	49	...	2,814
No. pupils 5th Stand. ...	...	16	25	50	254	4,193	4,528
No. pupils 4th Stand. ...	...	21	25	80	1,233	6,558	7,917
No. pupils 3rd Stand. ...	...	29	52	157	3,396	8,874	12,508
No. pupils 2nd Stand. ...	...	34	42	281	7,108	15,598	23,063
No. pupils 1st Stand. ...	...	64	38	368	11,039	22,845	34,354
No. pupils below Stand.	...	111	51	840	37,902	38,154	77,058
Total No pupils ...	2,096	292	296	1,986	60,991	99,605	165,266

1 Baroda State, Report of Public Instruction 1908–9.

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Number of Pupils in the Vernacular Schools according to Different Castes and Communities and their percent. of the Total Number of Pupils.[1]

		Village Schools.		Other vernacular schools		Total.	
		No.	Per cent	No.	Per cent	No.	Per cent
HINDUS.	Brahmins	2,265	3·8	12,137	2·3	14,502	8·8
	Kshatriyas Writers ...	161	·3	650	·6	811	0·5
	,, Warriors ...	4,593	7·5	4,487	4·3	9,080	5·5
	Merchants, Lawanas and Bhatias ...	623	1·0	1,256	1·2	1,879	1·1
	,, Banias ...	997	1·6	5,365	5·1	6,362	3·8
	Farmers, Patidars and Kunbis ...	15,617	25·6	23,305	22·4	38,922	23·6
	Religious mendicants (non-Brahmins)	1,002	1·7	954	·9	1,956	1·2
	Wandering and low profession class	7,024	11·5	9,022		16,046	9·7
	Unclean castes	4,213	6·9	10, 38	9·9	14,451	8·8
	Arya & Brahmo Samajists.	115	·2	97	·1	212	·1
	Others	...	...	...	...	29,736	18·0
	Total Hindus ...	48,889	·1	85,068	81·8	183,957	81·1
Jains		892	1·5	3,90	3·7	4,793	2·9
Animists		7,596	12·4	2,864	2·7	10,460	6·3
Parsis		101	·2	895	·8	496	·3
Mahomedans		3,406	5·6	12,023	11·5	15,429	9·3
Christians...		94	·2	15	...	109	·1
Jews		6	...	...	...	6	...
Sikhs		7	...	9	...	16	...
	Total ...	60,991	100·	104,275	100·	165,266	100·

1 Baroda State, Report of Public Instruction, 1908–9, p. 38.

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Distribution according to Age of Boys Attending the Vernacular Schools.[1]

	Village School.		Other Vernacular Schools.		Total.	
	No.	Per cent.	No.	Per cent.	No.	Per cent.
Above 20 years	5	...	504	·7	509	·4
Of 20 ,, ...	7	...	214	·3	221	·2
,, 19 ,, ...	6	...	248	·3	254	·2
,, 18 ,, ...	24	·1	462	·7	486	·4
,, 17 ,, ...	27	·1	751	1·0	788	·6
,, 16 ,, ...	78	·1	1,241	1·7	1,319	1·1
,, 15 ,, ...	262	·5	2,052	2·8	2,314	1·9
,, 14 ,, ...	713	1·5	3,526	4·9	4,239	3·5
,, 13 ,, ...	1,847	3·9	5,847	8·0	7,694	6·4
,, 12 ,, ...	4,438	9·3	8,114	11·1	12,552	10·4
,, 11 ,, ...	6,729	14·2	9,440	12·9	16,169	13.5
,, 10 ,, ...	7,526	15·9	10,814	14·8	18,340	15·3
,, 9 ,, ...	7,840	16·6	10,507	14·4	18,347	15·3
,, 8 ,, ...	7,058	14·9	7,882	10·8	14,940	12·4
,, 7 ,, ...	6,689	14·0	6,399	8·8	13,038	10·8
,, 6 ,, ...	3,199	6·8	3,548	4·8	6,747	5·6
,, 5 ,, ...	958	2·1	1,464	2·0	2,422	2·0
Total ...	47,366	100·	73,013	100·	120379	100·

1 Baroda State, Report of Public Instruction, 1908–9, p. 34.

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Number of Vernacular Schools and Pupils Examined, and Number of Pupils Passed in each Standard and percent.[1]

	Village Schools.	Other Vernacular Schools.	Total.
No. Schools Examined ...	1,499	1,226	2,725
No. Pupils on Rolls	59,477	104,420	163,897
No. Pupils present at Examination	38,256	78,076	116,332
Special Studies...	.....	1,025	1,025
No. Pupils Standard 7th ...	.....	80	80
Passed Standard 6th ...	40	1,647	1,689
,, Standard 5th ...	75	1,768	1,843
,, Standard 4th ...	321	2,667	2,988
,, Standard 3rd ...	971	3,696	4,667
,, Standard 2nd ...	1,925	5,142	7,067
,, Standard 1st ...	4,872	10,552	15,424
,, ,, Below ...	10,805	16,867	27,672
Total ...	19,009	43,396	62,405
Percent. of Pupils passed to those on Rolls	32·6	44·5	38·1
Percent. of Pupils passed to those Present	49·5	55·6	53·7

1 Baroda State, Report of Instruction, 1908-9, p. 35.

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